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ABSTRACT

The editors of "The American School Board Journal" and "The Executive Educator" magazines recently invited school leaders from across North America to send in curriculum ideas that work. From among the 1,026 entries that were submitted, a panel of judges selected 100, which are published in this special report. Criteria for selection included (1) evidence of success in measurable instructional outcomes within a specified budget; (2) evidence that the program could be used elsewhere in a comparable subject area or grade level; and (3) evidence that the program is relevant to the most pressing curricular and instructional needs of schools throughout North America. Entries are included for the following curricular areas: language arts, science/technology, math/computers, social studies, music/arts, health, citizenship, careers, learning to learn, enrichment, life skills, motivation, and parent involvement. Each entry includes a program title, the name and address of the school where it was developed, a brief description, and a contact person's name and address. (TE)

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INTRODUCTION

Who says creativity is dead? Last winter, the editors of *The American School Board Journal* and *The Executive Educator* magazines invited school leaders from across North America to send in curriculum ideas that work. Your ideas, as the magazines' editors explained in making the call for entries, did not have to be new, bold, or expensive. Perhaps you'd found a way to fit more instruction into the school day or to turn your school lunch program into a learning activity. If you had an idea that went beyond the ordinary, the editors asked you to share your success. And your response was extraordinary.

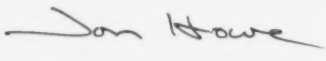
The magazines received 1,026 entries, from school systems large and small. The entries ranged from ideas that affected one subject in one classroom to those involving an entire school system. The editor-in-chief and publisher then asked a panel of distinguished judges to select from among those diverse entries the 100 published now in this special report, *100 Winning Curriculum Ideas*.

We at the National School Boards Association want you to know that *all* the entries had interest and merit. Winnowing them down to 100 was a necessary but exceedingly difficult task, and we are grateful to our independent panel of judges for the thoughtful, careful work that made possible the report you hold in your hands. And we appreciate the time and effort those of you who submitted ideas gave to your entries.

We hope the brief accounts of the programs contained in this special report will intrigue you and give rise to questions. If that happens, please write or call the person named at the end of each program description; he or she is ready and willing to tell you whatever else you want to know about the program.

By demonstrating what school systems are accomplishing in curriculum, N.S.B.A. hopes to make an important contribution to improving teaching and learning and to strengthening the public education system we all hold dear.

Very truly yours,



Jonathan Howe
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National School Boards Association

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One hundred ways to illuminate young minds

Nothing's more important to school people than curriculum. Curriculum ideas that excite students and increase learning are the essential element in the process of schooling.

In this special report, we highlight 100 ideas, from school systems across North America, that have generated enthusiasm among students and staff members. These winning ideas range from one school system's complete revision of its mathematics curriculum to an elementary school's course in sign language. Some of the ideas cover the basics—reading, writing, mathematics, history, science—but approach these traditional content areas in new ways. One elementary science program uses a "critter lab" filled with turtles, rabbits, and fish to help children learn science concepts and skills—and a respect for life. In another school, a "kids' mall" located right in the classroom teaches mathematics and other skills.

Some of the 100 ideas singled out in this special report go beyond the basics to emphasize real-world issues and skills. Students are learning practical law and facts about AIDS and drug use. They're being challenged to run a store or to see if they could live on a salary that a high school graduate might earn. They are learning values that will make them better people and gaining knowledge that will make them better citizens. Some of the curriculum programs are teaching students how to live healthier and more successful lives. Students are gaining organizational and study skills to help them succeed in school, and they are learning who they are and what they want to do through guidance programs that emphasize decision-making skills.

Students are building modular homes; they are working with robots and writing plays for statewide contests. Some are competing in Olympic-style contests that focus on academic achievement rather than sports prowess; others are winning admittance to a "Math Hall of Fame" or being named "Student of the Week."

The variety is remarkable, but the curriculum ideas in this special supplement have a consistent theme: They are attempts to build students' skills in academic areas, to broaden and enrich their knowledge, and to build their confidence to handle the world that awaits them after graduation.

We asked a distinguished panel of five judges to select the 100 ideas presented here from the 1,026 submitted. The judges, who deserve special thanks for their dedicated work: **William Attea,** superintendent in Glenview, Ill., and a 1987 laureate of "The Executive Educator 100," a nationally recognized group of outstanding school administrators; **Charles Fowler,** superintendent in Sarasota, Fla., and a 1984 and 1987 laureate of "The Executive Educator 100"; **Robert Haderlein,** former president of the National School Boards Association and a school board member in Girard, Kan.; **M. Joan Parent,** former president of N.S.B.A. and a school board member in Foley, Minn.; and **Clara Rutherford,** a school board member in Detroit. (For the criteria the judges used in evaluating the curriculum submissions, see the list at left.)

To help readers find ideas in their special areas of interest, the editors have arranged the 100 winners by subject matter. But many of the curriculums described here defy this kind of categorizing, so we urge you to read widely; within the subject categories, the programs are presented in purely random order. All are excellent, and we hope they will stimulate you to search for ways to enhance the curriculum of your own school system.

Curriculum criteria

Before beginning the difficult job of selecting 100 winning curriculum ideas from the many excellent ones submitted, the judges established these three criteria for evaluating entries:

- *Evidence that the program achieves success in terms of defined and measurable instructional outcomes and is carried out within a specified budget.*
- *Evidence that the program could be used elsewhere in a comparable subject area or grade level—regardless of another school system's size, location, or financial resources.*
- *Evidence that the program is relevant to the most pressing curricular and instructional needs of schools throughout North America.* A partial list of such needs, as identified by the judges, includes these: teaching problem solving and higher-order thinking skills; developing program assessment techniques; integrating technology with the instructional program; teaching about communicable and sexually transmitted diseases, including AIDS; using a holistic approach to the language arts; teaching civics, geography, and history; and teaching languages other than English.

LANGUAGE ARTS

Reading Across the Grades, Hopewell (Virginia) Public Schools. **Objective:** To increase reading skills on all grade levels.

This school system is making an all-out effort to make reading the cornerstone of its academic program. "Our students were reading one to two years below national levels," says Steven E. Ballowe, associate superintendent for instruction. So Ballowe budgeted $12,000 last year to improve reading in this 4,000-student system. Most of the money went to buy books for libraries at every grade level at every school. The libraries have multiple copies of 24 books for each grade, divided into two basic categories: required, in-school reading and recommended, out-of-school reading. The school system also purchased a third category of lower-level reading books for students not reading at their grade level. "We have high-interest books for kindergarten through grade twelve, plus classics [that have] endured over the years," Ballowe explains. "I didn't want them to read only about Dick meeting Barbie. They need to know Victor Hugo, too." Ballowe has enlisted parents' support in his efforts to improve reading. Parents are urged to read 20 or 25 minutes a day with their kindergarten and first grade children, for example, and to visit the library with their children once a week. The school system also has asked parents to limit the amount of television their children are allowed to watch to leave time for reading. The schools are trying hard to teach reading in ways that are based on a student's strengths, says Ballowe. "Instead of focusing only on phonetic reading, we use alternate reading series that use other methods. We try to match up the learner with the method by which he learns best." Students have become excited about reading, Ballowe says. "We really feel the climate has changed." According to Ballowe, reading scores in statewide tests last spring showed "the greatest gains we've ever had, especially in elementary school." **Contact:** Steven E. Ballowe, Associate Superintendent for Instruction, Hopewell Public Schools, 103 N. 11th Ave., Hopewell, Va. 23860; 804/541-2365.

Building Communities of Readers and Writers, Tenakill School, Closter (New Jersey) Public Schools. **Objective:** To teach children in grades two through four the strategies and techniques used by successful readers and writers.

E.B. White, Arnold Lobel, and Tomie dePaola—these are some of the "master writers" children in this elementary school read and use as models to learn the craft of writing. Through daily reading/writing workshops, students learn to develop a lifelong interest in books, says teacher Edith Ziegler, who in conjunction with two other teachers started the workshop program. Originally, the program was limited to writing workshops, Ziegler says. But those workshops proved to be such an "exciting, challenging, and special part of the day" that it seemed "downright peculiar not to bring some of the same elements into reading," she says. Each workshop now follows the same simple format: In a brief lesson, the teacher focuses on one important part of the writing process. Afterwards, students have time for individual reading and writing activities; then they meet together to go over what they've learned. The youngsters select their own books because the teachers believe children will be more interested in literature if they choose their own reading materials and write about their own concerns and interests. "Teachers convince children through modeling and guided practice that reading and writing are satisfying, worthwhile activities in which one can engage throughout life," Ziegler says. **Contact:** Edith Ziegler, James Klika, or Lynn Stampa, Tenakill School, 275 High St., Closter, N.J. 07624; 201/768-1332.

Exploratory Foreign Language, Fairview Junior High School, Central Kitsap School District No. 401, Silverdale, Wash. **Objective:** To provide eighth grade students with cultural and linguistic enrichment and give them a sounder basis for choosing languages for further study.

Before they go on to high school, students at Fairview have a chance to sample four foreign languages: French, German, Spanish, and Mandarin Chinese. A two-semester elective course gives students basic reading, writing, and speaking skills in all these languages and a chance to decide on the language they might want to study in high school. Giving students the opportunity to compare languages, Assistant Principal David Rawls says, helps the students make sounder choices: "They will want to stick with the language they've chosen," he says. Rawls also hopes interest in foreign languages will increase. So far, it has. Some 62 percent of ninth grade students elected a foreign language in 1986-87, an increase over previous years. The exploratory course covers eight themes or topics in each language. Because the topics are based on foreign travel, students learn to count, figure currency, give directions, seek medical and other kinds of help, read menus, and request information in each language. Overall, Rawls says, the course has attracted a "good, solid enrollment" and has helped the students: "They've enjoyed the experience of learning the languages and having the opportunity to compare." **Contact:** David Rawls, Assistant Principal, Fairview Junior High School, P.O. Box 8, Silverdale, Wash. 98383; 206/692-3129.

Reading Is Out of This World! New Plymouth Elementary School, New Plymouth (Idaho) School District No. 372. **Objective:** To interest children in becoming independent readers and to encourage reading in content areas.

Reading programs in many schools might be fun, but in this school, the program is out of this world. Last year, during a one-week reading festival emphasizing space travel, most other school activities were suspended while all the students concentrated on reading. Students read about the history of space travel in history class and wrote stories about astronauts in language arts class. Guest speakers included a skydiver, a helicopter pilot, and a hot air balloonist. Classes competed against each other to see who could read the most pages in one week; the winning class got to give the hot air balloonist a send-off. "One first grade class read more than 6,000 pages of easy-to-read books, and one intermediate group read more than 2,000 pages," says Lori Ybarrondo, reading consultant and

fifth grade teacher. The week also included a Turn Off the Television challenge: Parents were asked to turn their sets off for a week and spend time reading with their children. At an assembly on the last day of the festival, those who had turned off their television sets that week received awards. "One third of the students said their families participated," Ybarrondo says. "Parents said it was a neat week. It gave them time with their children." **Contact:** Lori Ybarrondo, New Plymouth Elementary School, P.O. Box 388, New Plymouth, Idaho 83655; 208/278-5334.

Butcher, Baker, and Writer, Lakeland Elementary School, Solvay School District, Syracuse, N.Y. **Objective:** To give students practice in writing from experience and make them aware of career possibilities and the basic skills needed in the world of work.

When the butcher, the baker, and the advertising executive come to this school, they give fourth grade students something to write about. This language arts program invites community people to tell students about their jobs and explain the basic skills the jobs require. After the visitor leaves, students make vocabulary lists based on the job they've just heard about. Then, they use the vocabulary lists to write thank-you letters and outline a report about the presentation. Students have met people with many different kinds of jobs, including an advertising executive, a television commentator, and an F.B.I. agent. Whenever possible, the students also go on field trips to places where the speakers work. Teacher Paula Verel, who developed the program with a colleague, thought her students needed practice in writing from experience. The program provides those experiences and makes students aware of possible careers. **Contact:** Richard Lauricella or Paula Verel, Lakeland Elementary School, Bury Drive, Solvay, N.Y. 13209; 315/487-7061.

Community Read-In, Cajon Valley Union School District, El Cajon, Calif. **Objective:** To motivate students to read and to involve the community in a school program.

This school system believes that the spoken word is powerful, so it stages an annual Community Read-In. Last year, more than 300 adults came to El Cajon's schools during the last period of one day and read aloud to some 10,000 students in kindergarten through grade eight. P.T.O. councils contact adults who might want to participate in the event; those who agree to take part are scheduled into a classroom. The adults can choose their own books or use books selected by school librarians. Last year's readers included the mayor, superintendent, members of the city council and school board, and scores of parents, business people, and retired citizens. "We use adult role models to show the importance of reading to youngsters," says Carol Rowley, program specialist for instructional media services. "We believe that reading aloud to students from quality works of literature will motivate them to read and will demonstrate to them that reading can bring lifelong joy." The school system also encourages its students to join the Read-In by reading aloud to someone else, perhaps a younger sibling at home. "The community at large really enjoys coming," says Rowley. **Contact:** Carol Rowley, Program Specialist, Instructional Media Services, Cajon Valley Union School District, 189 Roanoke Road, El Cajon, Calif. 92022; 619/588-3027.

Flex Grouping Plan, Beaver Dam (Wisconsin) Unified School District. **Objective:** To supplement the traditional reading program with a component that allows students to read in areas that interest them and to do recreational reading.

If some reading is good, more is better. This school system supplements its primary reading program by involving students in additional small, specialized reading groups. The Flex Grouping Plan has three cycles: In Cycle A, students who need certain phonics skills are grouped together, and teachers use games, audiovisual materials, and their own activities to help students master those skills. In Cycle B (recreational reading), students of various grades and ability levels are grouped together; they read for enjoyment and discuss what they read with others in the group. Children in Cycle C (reading for information in areas of mutual interest), carry out reading projects. Each cycle, which is led by teacher aides as well as by classroom teachers, meets 30 minutes a day for six consecutive days. A student stays in one group for the entire time. Because ten Flex cycles are held each year, all students work with various teachers and students by year's end. **Contact:** Julie Bran, Director of Reading, Beaver Dam Unified School District, 705 McKinley St., Beaver Dam, Wis. 53916; 414/887-7131.

Name that Book, Downers Grove (Illinois) School District No. 58. **Objective:** To encourage elementary school students to read for detail.

Remember *Name that Tune,* the quiz show that tested musical knowledge? This school system uses a variation on the theme: Name that Book is a contest that motivates students in grades three to six to read more and to remember what they read. The program, designed by teacher Judy Cochran, works like this: All children in a reading class receive a list of ten books to read over a three-month period. (Cochran gets multiple copies of each book through interlibrary loans.) After the students have read the ten titles, the class is divided into teams of four or five members each. The teacher reads a passage from one of the books, and the first team to hit the buzzer and name the book correctly wins a point. An elimination tournament takes place during the school system's library week, and the winning team from each reading class receives paperback books as prizes. Students enjoy the books and show a "keen interest" in reading for detail, says Cochran, who adds that she keeps various reading levels in mind when selecting the books. That way, she explains, "children for whom reading is normally difficult are able to compete successfully." Another positive aspect of the program is the cooperation it engenders: The children on each team work together, even though competition is strong among the teams. **Contact:** Judy Cochran, Learning Resource Center, Downers Grove School District No. 58, 1860 63rd St., Downers Grove, Ill. 60516; 312/719-5840.

Let's Go to the Library, Northside Elementary School, School District of Monroe, Wis. **Objective:** To introduce students to the rules and services of the school library.

A little mouse named Maxwell stars in a booklet that helps kindergarten and first grade students in this

elementary school learn to use the library. The library—or "instructional materials center" (I.M.C.)—is the hub of the school, says Director Marilyn Kubly, who wrote the booklet. "I wanted to excite children about using the library and help them learn the rules." Maxwell, who also is the school mascot, gently guides the students through the I.M.C., showing readers what a library card looks like, explaining the rules, and telling students they can watch a film or use a computer as well as read and borrow books. When new students come into the school, they review the booklet with Kubly, then take it home and show it to their parents. The booklet, illustrated by the school's art teacher, is only one part of Kubly's plan to make the I.M.C. an exciting and interesting place. Every week, she runs a contest for each grade level: She gives students a question sheet related to their academic work. Students use the I.M.C. to try to find the answers; a perfect score wins them a bookmark. For one contest, Kubly presented a daily trivia question over the local cable television channel. The questions involved characters in children's fiction. Kubly got answers from children throughout the school system—and from adults as well. **Contact:** Marilyn Kubly, Director, Instructional Materials Center, Northside Elementary School, 3005 8½ St., Monroe, Wis. 53566; 608/328-9156.

Parallel Scheduling, Newport News (Virginia) City Public Schools. **Objective:** To increase uninterrupted time for reading instruction.

Several elementary schools in this school system are trying out a pilot program that restructures the school day to allow maximum time for reading instruction. Called Parallel Scheduling, the program gives teachers blocks of uninterrupted time to teach reading. One group of students in a class stays with the classroom teacher; the other group moves out of the classroom to learn about art, music, physical education, or computers. The program allows the classroom teacher to deal with only one group of 12 students who perform at about the same reading level and frees him from supervising other children who are waiting their turn. "You do have to be certain that everyone knows exactly where he has to be," says Mildred Manning, director of elementary curriculum and reading. "And you must have an adequate number of resource people in music, art, and other activities." An assessment of the program, now used in three schools, has shown good results. In the schools that used Parallel Scheduling last year, class time actually spent on reading was 87.9 percent, compared with 72.3 percent in similar schools that did not use the system. But the assessment report said the "most striking and impressive" result of the pilot program was the improvement in student discipline. In schools that used Parallel Scheduling, teachers had to interrupt reading to correct behavior an average of six times; the average was 25 times in schools that did not participate in the program. "Teachers don't have to tell Johnny, 'Go back and finish such and such,' " says Manning. "They don't have to deal with busywork. We now have more academic learning than we've ever had before." **Contact:** Mildred Manning, Director, Elementary Curriculum/Reading, Newport News City Public Schools, 12465 Warwick Blvd., Newport News, Va. 23606-0130; 804/599-8720.

Writing on Computers, Deer Path Junior High School, Lake Forest (Illinois) School District No. 67. **Objective:** To use word processing skills to improve writing skills.

Students write more—and better—at computer terminals, teacher Jan Dawson has found, so she's made the computer an integral part of her creative writing program for seventh and eighth grade students. When she began using computers, some students in her classes already had completed a course in basic computer skills; others had no previous instruction. But Dawson says she's taught everyone enough to get them through the course. Now, using an appropriate software program, students compose directly at their terminals. Dawson works closely with the students as they start out with paragraph writing and progress to composition writing in the second semester. Rather than simply saying, "Your paper is due Friday," she sees the work in progress and gives students instruction as they write. "I help students write stronger topic sentences, for example," she says. "They are more willing to edit and correct, because that is easier to do at a computer terminal. They don't have to retype or white out." **Contact:** Jan Dawson, Deer Path Junior High School, 95 W. Deerpath Road, Lake Forest, Ill. 60045; 312/234-6010, ext. 138.

Computer Communication Laboratory, Viroqua Middle School, Viroqua (Wisconsin) Area Schools. **Objective:** To integrate reading, writing, and computer skills into all areas of the curriculum.

This middle school has installed its Computer Communication Laboratory (C.C.L.) to supplement and enhance students' skills in a variety of areas. The school modified its class schedule to allow students to be released from regular classes and rotated into the laboratory. There, teachers use 16 computers to teach communication and computer skills to seventh and eighth grade students. One goal is to have students write better in all subjects, not simply in English class, explains C.C.L. teacher Olene Munson. Working with classroom teachers, she helps teach students to write more clearly and cogently in every content area. At the computer, students learn how to choose a topic, gather information, and organize their ideas before they write a history or a social studies paper. They also learn study strategies to assist them when reading about any subject. The laboratory, a $30,000 project the first year, now costs approximately $8,000 annually to operate. The investment is worth it, Munson indicates: The laboratory has generated enthusiasm among students and staff members and improved the quality of students' work. **Contact:** Maynard Guist or Olene Munson, Viroqua Middle School, Viroqua Area Schools, Blackhawk Drive, Viroqua, Wis. 54665; 608/637-3171.

Have a Heart, Cherokee School, Lake Forest (Illinois) School District No. 67. **Objective:** To teach second grade students the grammatical concepts of homonyms, antonyms, and synonyms.

Candy hearts and hugs from the teacher are motivating second grade students in this elementary school to learn grammar. Teacher Pat Carmony has devised a game to help students classify homonyms (words that are

spelled and pronounced alike but have different meanings), antonyms (words whose meanings are the opposite of one another), and synonyms (words whose meanings are the same or nearly the same). She glues heart decorations on three bags and labels each bag homonym, antonym, or synonym. She then writes 24 pairs of words—eight in each category—on heart-shaped construction paper. On six additional pieces of paper, she writes the word Love. Each child draws a heart from the pile and decides in which bag the two words written on it belong. If a child gets a heart with the word Love, he gets a candy heart and a hug from the teacher. The game, which reinforces skills already taught, gives the children extra practice in reading out loud. And best of all, it's fun. **Contact:** Pat Carmony, Cherokee School, 475 E. Cherokee Road, Lake Forest, Ill. 60045; 312/234-3805.

Writing About Heroes, Hawthorne Elementary School, Lincoln (Nebraska) Public Schools. **Objective:** To get children reading, writing, and thinking about the qualities present in a heroic act or person.

Last year, teacher Fran Reinehr decided to try an approach that was both old-fashioned and revolutionary: She built her fifth and sixth grade English class around a study of the hero, using *The Aeneid* by the Roman poet Virgil as the centerpiece of the course. Reinehr admits she was afraid Virgil's hero Aeneas might not go over with kids who are more used to *Miami Vice* than Roman virtue, but she says the kids "really got excited" about Aeneas and his problems. Students began the full-year course by discussing the qualities that characterize a hero and reading modern stories (such as *The Pushcart Wars, Sadako and One Thousand Paper Cranes,* and *One-eyed Cat*). Their challenge: to pick out the heroic figures in these stories. In the second semester, they moved on to Greek mythology, and then—after discussing the attributes of classical heroes—to *The Aeneid,* which Reinehr read aloud in its entirety. During the year, students wrote six essays about heroism. Some were about Aeneas' heroic efforts and his heroic choices; others called on students to describe heroic people they had known and to speculate about their own heroic possibilities. At the end of the year, the class presented a choral version of *The Aeneid,* which dramatized important scenes, for an audience of 300. "Some of the parents were so moved they wept," recalls Reinehr. "They had no idea their children could do something as wonderful as that." **Contact:** Frances Reinehr, Hawthorne Elementary School, 300 S. 48th St., Lincoln, Neb. 68510; 402/488-2293.

SCIENCE / TECHNOLOGY

Engineering Concepts, Edison Computech School, Fresno (California) Unified School District. **Objective:** To give students the chance to explore the world using engineering principles and to find out about the profession of engineering.

Students in this class don't just learn what engineers do—they become engineers, designing cars that go through wind tunnels, constructing geodesic domes, and making robots that go through a maze. Using a blend of science and mathematics, the course introduces seventh and eighth grade students to several engineering fields, including mechanical and structural engineering and robotics. "Students tend to perceive engineers as people who monitor graphs or endlessly calculate numbers," says teacher Sheldon Erickson. "They need the opportunity to see this career as a challenging and creative application of knowledge to the problems we face in our world." Erickson, who designed the course, helps students solve real-life, concrete problems by encouraging them to work with their hands as well as with their minds. Using wood, clay, robot kits, and an advanced version of building toys they played with as children, the students do a variety of projects. After working on several models, for instance, students built a classroom-size geodesic dome. The project made use of geometry and algebra, and it challenged students' ability to think a problem through and come up with an answer: How could they use a bunch of triangles to create a slightly curved dome? "The students were impressed with building something that seemed so complicated," Erickson says. Other projects include surveying and mapping; building bridges; working with electrical circuitry, turbines, and gears; and designing a model car. Erickson believes that junior high school students need to work with their hands. "They are good at thinking, but they would miss doing manipulative things and using materials not just for play but for higher-level thinking," he says. The program, started last year as a pilot project, has given the students an introduction to the kinds of skills necessary to work in engineering and other high-technology fields, Erickson says. "The projects really have increased the students' interest in science and improved their mathematics skills." **Contact:** Sheldon Erickson, Edison Computech School, 555 E. Belgravia, Fresno, Calif. 93706; 209/441-3971.

Gunpowder River Action Project, Baltimore County Public Schools, Towson, Md. **Objective:** To make students ecologically aware by involving them in projects to restore a river to health.

Huck Finn wasn't the only young kid ever to be fascinated by a river. In this school system, students from kindergarten through high school have focused on a badly polluted river and tried to bring it back to life. As part of an extensive ecological study, students learned to identify healthy and unhealthy parts of the Gunpowder River, which flows near 22 of the system's schools. With a two-year grant from the state, teachers and students at these schools undertook a variety of activities to clean up the river. Each school recruited and trained a group of parent volunteers to accompany students as they visited their parts of the river. Students learned to test water temperature, depth, and sediment levels and to detect the presence or absence of certain insects—all factors that affect a river's health. High school students did chemical testing and visited construction sites to look for sediment run-off, which can choke a river. "After our students noticed several run-off violations, Baltimore County increased the number of inspectors at construction sites," says Science Coordinator Robert F. McNeish. In class, lessons reinforced the fieldwork. Students wrote stories about the river, developed posters and bulletin boards, kept logs of field trips, and adopted "critters" from the field. Last spring, the school system held its second Awareness

Day, and more than 1,000 students met with the governor of Maryland for a brief ceremony. After the ceremony, the students helped plant trees on the river's bank and stock the stream with trout. The river project, says County Science Supervisor Benjamin Poscover, has given students a greater awareness of "the significance of the human impact" on a natural resource that is important to their lives. **Contact:** Robert F. McNeish, Science Coordinator, Baltimore County Public Schools, 6901 N. Charles St., Towson, Md. 21204; 301/494-4251.

Primary Integrated Science Units, Mesa (Arizona) Unified School District. **Objective:** To integrate science with other curriculum areas.

The Mesa schools are pioneering an elementary science curriculum that uses no textbooks and requires no science expertise to teach. The program uses a variety of self-contained kits, called Primary Integrated Science Units, developed by the school system and field-tested over a five-year period. These kits deal with science processes and concepts for the primary grades, and they also incorporate related activities in social studies, art, music, mathematics, and language arts. "By integrating science and social studies, including activities from reading and math, we've avoided hearing the phrase, 'I don't have time for science,' " says science specialist JoAnne Wolf. The system works like this: Each year, all primary school teachers review the available kits—which focus on different aspects of the sciences—to determine which best fit into their learning plan. The teacher then places an order with the system's Science Resource Center, which reviews the orders to ensure that units on earth sciences, life sciences, and physical sciences are included and that they form a suitable yearlong plan. The clerical staff assembles the materials—teacher directions, student booklets, audiovisual materials, and experiments—and delivers them to each teacher's school. Resource teachers train teachers to use a specific kit when necessary, "but one of our goals is to make the teacher with no science background feel comfortable," Wolf says. "Our teachers' editions contain enough background so that teachers don't have to go to the library to teach about energy." The system works well because using themes and incorporating materials and activities from other disciplines is the way most primary teachers like to teach, Wolf says. "If they're doing a unit on dinosaurs, they'd naturally do a related spelling activity or an art lesson." Because the teachers can, within certain limits, choose their science units, students in one first grade class might be learning something different from those in another class. "But that's not a problem," Wolf says. "Our main theme in the first grade is observation techniques, using the five senses. The same concepts will be covered, no matter what particular units are taught." **Contact:** JoAnne Wolf, Science Specialist, Mesa Unified School District, Science Resource Center, 143 S. Alma School Road, Mesa, Ariz. 85202; 602/898-7815.

Critter Lab, Southern Elementary School, Guilford County Public Schools, Greensboro, N.C. **Objective:** To offer students a hands-on approach to science and to integrate science with other areas of the curriculum.

Most young children love animals, and this elementary school science enrichment program capitalizes on that love: The program uses a Critter Lab—filled with turtles, mice, hamsters, and other animals—to help teach science to students in kindergarten through grade three. The animals, brought in during the year by teachers and students, are housed in the school's media center. The center also contains science kits, encyclopedias, magazines, and field guides that give students easy access to reference materials about animals. Children spend time each week observing the animals and studying how and where they live, how they get their food, and what characteristics groups of animals share. Students collect data in observation journals and use the data as the basis for creative writing assignments. Language skills also are enhanced with the use of teacher-made word games about animals. The science activities are integrated with all other areas of the curriculum, says teacher Jacqueline Poe. Study of the monarch butterfly's migration path, for example, lends itself to study of map skills in social studies, Poe explains. "By observing, researching, and caring for their animals, the students have the opportunity not only to grow in their knowledge of life, but also to gain a better understanding of and respect for life's significance," she says. Another benefit: The Critter Lab helps some children adjust to school more easily. "A lot of children were terrified of school in the beginning, but they trust animals, and the Critter Lab promotes a trusting environment," Poe explains. Dealing with the deaths of some of the animals also has helped students deal more effectively with crises in their own lives, she says. (The school system provides a small animal cemetery along with a nature trail.) The laboratory, which costs approximately $200 a year to run, has expanded in both size and use during its three years of operation. **Contact:** Jacqueline Poe, Southern Elementary School, 5720 Drake Road, Greensboro, N.C. 27406; 919/674-2224.

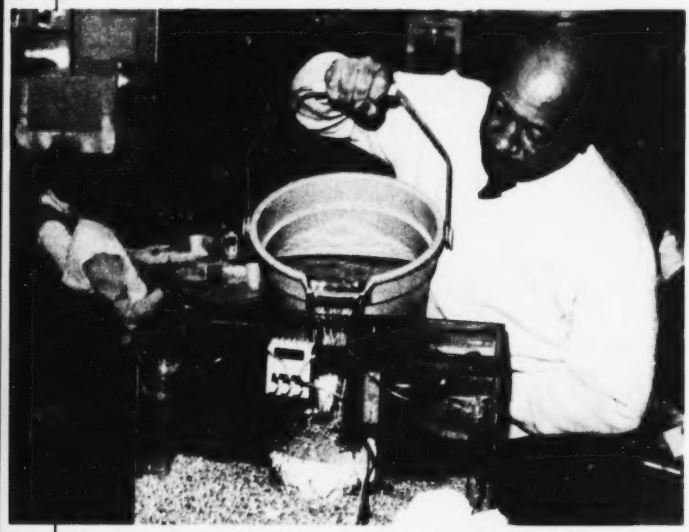
Hands-On Elementary Science Program, Carroll County (Maryland) Board of Education. **Objective:** To give students hands-on science instruction based on science processes and to motivate teachers to spend more time on science instruction.

Elementary school science students in this school system don't read about insects: They march right out to the schoolyard and collect them. Then, they bring their finds back to the classroom so they can observe and talk about them. That activity is part of a comprehensive elementary school science curriculum that employs a hands-on approach to science teaching and learning. The program uses no textbooks. Instead, it relies on locally developed materials designed around science skills rather than concepts. "We actually deemphasize content," says Science Supervisor Gary E. Dunkleberger. "What we want to do is teach students skills of observation. They have an inherent interest in science, and we need to capture that." Because there are no texts, all lessons are based on activities described in teachers' guides. Follow-up lessons extend those activities into art, mathematics, language arts, and other areas. "Everything youngsters do either involves, or is the result of, a hands-on activity," Dunkleberger explains. The program, he says, has "completely revolutionized how we teach science. Science instruction has gone from the read-about and talk-about

method to something almost 180 degrees away." Students' attitudes toward the program are positive. Fifty-one percent of students also participate in an optional vacation science program; they take home science activities they can do with their parents during the summer. "Kids are excited, and the kids' excitement has fueled the teachers," Dunkleberger says. "That excitement makes it all worthwhile." **Contact:** Gary E. Dunkleberger, Supervisor of Science, Carroll County Board of Education, 55 N. Court St., Westminster, Md. 21157; 301/876-2208, ext. 3217.

Super Science Saturdays, Virginia Beach (Virginia) City Public Schools. **Objective:** To advance the cause of superior science teaching and learning in the elementary classroom.

"Design a package to protect an egg dropped from a great height." That's what elementary school teachers who participated in a special science teaching program in this Virginia city were asked to do last year. The experiment was part of the school system's Super Science Saturdays, a series of four workshops designed to generate excitement among teachers and to offer classroom activities geared to the science courses they teach. "We wanted to provide better science teaching and learning," says Deborah Dyer, an instructional specialist in science and coordinator of the program. "These workshops are highly motivating. We try to get teachers to feel how great science can be." Teachers in kindergarten through grade six are invited to attend the workshops on a first-come, first-served basis. The $1,000-a-year program is overseen by the school system's Office of Curriculum and Staff Development, and Dyer and five other teachers volunteer their services as session leaders. At each session, the trainers establish a model classroom and demonstrate hands-on activities, using materials and supplies the teachers easily can obtain on their own. Teachers are grouped by grade level at each session, and the activities concern subjects they will teach later in the year. The workshops also emphasize ways science lessons can enhance other subjects—especially language arts and mathematics—and special workshops are devoted to problem solving, writing, music, art, computers, and community resources. The program has improved the status of elementary school teachers and helped them realize that "science teaching is an important component in dealing with young people," Dyer says. "We need to share science knowledge, ideas, and activities. At our Super Science Saturdays, we touch the future." **Contact:** Deborah Dyer, Instructional Specialist in Science, Virginia Beach City Public Schools, P.O. Box 6038, Virginia Beach, Va. 23456; 804/427-4464.



On a Super Science Saturday, teachers in Virginia Beach, Va., learn how to set up an aquarium.

Advanced Chemistry, Charles M. Russell High School, School District No. 1, Great Falls, Mont. **Objective:** To provide students with a strong laboratory foundation in chemistry and a good background for a college honors program.

Because Russell High School had no advanced placement program, chemistry teacher Ray Hamilton had to design his own. Now, students considering careers in engineering, medicine, or other fields that call for a good background in chemistry can take an advanced course that gives them considerable computer and laboratory experience. Students also pursue independent research, choosing their own topics—determining the amount of calcium in an eggshell, for example, or making and studying the properties of several complex compounds of iron. The students are expected to research, study, and design their own experiments, decide what equipment to use, and form a hypothesis. "They run the whole show, from start to finish," Hamilton says. Each student must then write a report of his project, and write it so clearly and completely that it could be submitted to a scientific journal. "The kids don't break new ground—we don't have time or equipment for that. But the projects are new for them, and they often do some interesting things or take unusual approaches to solve their problems," Hamilton says. The course stands students in good stead when they go on to college, too, he says: "They've come back to tell me their experiences in this course were very, very helpful." **Contact:** Ray Hamilton, Charles M. Russell High School, 228 17th Ave. N.W., Great Falls, Mont. 59404; 406/791-2387.

Man Curriculum—Science and Social Studies Integration, Upper St. Clair (Pennsylvania) School District. **Objective:** To help students understand the relationship between biological environment and technological society.

What is the impact of science and technology on people and society? That's the question this innovative curriculum is helping middle school students answer. In three phases, the program integrates science and social studies to explore the relationship among people, their biological environment, and society. The first phase helps students learn skills and content in individual subject areas. Phase Two offers remedial help for those who need it, as well as enrichment activities that let students further explore ideas and concepts that interest them. The interdisciplinary aspect of the program takes place in Phase Three: Students do activities geared to help them

understand how scientific and technological developments influence the world and social decisions. One example: Students might look at Brasilia, a city built in the jungle without considering the plants, animals, air, water, and soil that make up its environment. The unit includes a three-day field trip to an environmental center, where students become "earth wardens" who learn to appreciate their role in protecting nature. "By the end of Phase Three, we hope students can see how science and technology affect everyday life," says James L. Smoyer, middle school science curriculum leader. "They, as citizens, must know how to find the facts related to local and world issues so they can make educated decisions in an adult world." Smoyer says the curriculum, which started in 1971, is constantly evolving—"not dramatically, but we try to address changing times and a changing school enrollment and staff." **Contact:** James L. Smoyer, Middle School Science Curriculum Leader, Upper St. Clair School District, 1820 McLaughlin Run Road, Upper St. Clair, Pa. 12541; 412/854-3046.

Ecosystem, Shorewood School District, Milwaukee. **Objective:** To provide urban students with a hands-on experience in ecology.

City-bred boys and girls have a chance to see the inner workings of nature through Shorewood's Ecosystem, an elaborate, glass-enclosed model of a Wisconsin woodland that includes a pond, marsh, and river. The enclosure holds more than five tons of soil, gravel, and sand as well as 1,300 gallons of water; it is populated by birds, fish, snakes, and insects who live among its plants and trees. The ecosystem, which illustrates the complex relationships among living things, is the hands-on component of the school system's science curriculum. "The purpose of such a system is to develop in urban students an environmental consciousness and a love and appreciation of nature," says program coordinator Martin Gutnik. The ecosystem, which is paid for by foundation grants, is used to teach different science skills at different grade levels. But teachers in art, social science, and other disciplines also use the ecosystem for lessons. Students are "fascinated by the ecosystem," Gutnik says. "Their interest goes beyond the time they spend in the classroom. Groups of students volunteer to help maintain the system. . . . There is always a long list of volunteers." Gutnik, who started out with cages of creatures in his classroom, finds satisfaction in having developed a program that helps students understand how nature works. "If we have this appreciation," he says, "we won't have nature wasted by people." **Contact:** Martin Gutnik, Ecosystem Coordinator, Shorewood School District, 1701 E. Capitol Drive, Milwaukee 53211; 414/963-6962.

Coalition of Parents, Faculty, Community, and Industry for Science Education, Bullard High School, Fresno (California) Unified School District. **Objective:** To generate a network of people and institutions to support the school's science programs.

Tired of inferior equipment and laboratories, Tim Thomas, who chairs Bullard High School's science department, wanted to give his students a chance to do their best work in science. "I could see what was going on in other places," he says. "We wanted to fly, too." So Thomas and other staff members organized a Coalition of Parents, Faculty, Community, and Industry for Science Education. Among the coalition's goals: to provide equipment, stimulate faculty training and leadership, and upgrade facilities and curriculum. Starting with a $10,000 seed grant from the school system and "lots of support" from the superintendent, the coalition quickly took off, Thomas says. Faculty members and the Science Parents Auxiliary Committee raised $25,000 through various activities, including a two-mile race called The Sky's the Limit Fund Run and a two-day computer expo that drew 3,500 visitors. Motivated by parent involvement and concern, the science faculty began to expand its offerings to students. The school now offers a science research class, classes for the gifted, and a science seminar that has become a systemwide activity. Students, encouraged to participate actively in competitions, have won a host of prizes at science fairs. One Bullard High student won the California State Science Fair Sweepstakes. Coalition support has had other benefits: Enrollments in some science courses are up, and test scores have improved, too. Another dramatic change is in teachers' attitudes, Thomas says. "There is increased rapport, communications, and cooperation among teachers," he notes. Now, the faculty is seeking grants to rewrite the entire curriculum to accommodate the computers and other equipment purchased with coalition funds. **Contact:** Tim Thomas, Science Department Chair, Bullard High School, 5445 N. Palm, Fresno, Calif. 93705; 209/441-3795.

NORSTAR Robotics Program, Norfolk (Virginia) Public Schools. **Objective:** To introduce students to robotics manufacturing and applications, especially in space science.

Students in this specialized program work closely with representatives of government and industry as they learn to use robots in actual work situations. Some 25 high school students, from both gifted and talented and vocational programs, take part in the year-old robotics program of NORSTAR, the Norfolk Public Schools Science and Technology Research Program. They first learn to understand and operate robotics by taking apart and putting together the program's prototype teaching equipment. This equipment had suffered from many technical problems. But, says James R. Doyle, supervisor of technology education for the school system, "We turned those problems into a learning experience for the students. Trouble-shooting the equipment has become part of our curriculum." With that background, students learn to apply robotics to space science and other important fields. Last year, for example, students worked with the National Aeronautics and Space Administration to design a robot that might be included in the agency's next space shuttle flight. Doyle says the Ford Motor Co. also has asked students to help the company develop an automated assembly procedure that the automobile company could adapt to its own equipment. To do those tasks, the students work in research teams with varying responsibilities. Each group turns in a weekly report discussing what it has accomplished and what it plans to do the next week. The second semester, students are assigned different responsibilities. "The biggest problem we have is getting students to go home in the afternoon,"

Doyle says. The robotics division represents the "coming of age of technology. Everything we do here has potential career implications," he says. "We are offering students many different avenues to careers in high technology." **Contact:** James R. Doyle, Supervisor, Technology Education, Norfolk Public Schools, 800 E. City Hall Ave., Room 1008, Norfolk, Va. 23510; 804/441-2957.

Elementary Science Program, Anchorage School District. **Objective:** To involve students in carrying out science activities and help them develop positive attitudes toward science.

In this school system, elementary school students don't simply read about science; they do it. The Anchorage program uses hands-on activities to help students understand the processes of science—how to make and test hypotheses and solve problems. The program has increased student enthusiasm for science and the competence of students going on to study science in the system's junior high schools, says Ruth Keitz, executive director for curriculum and instructional services. The heart of the program is the instructional kits developed by staff members and based on materials designed by the National Science Foundation. The kits explain topics in earth, life, and physical science and include teachers' guides, evaluations, and examinations for the students; they might include videotapes in the near future. Of critical importance to the program's operation is the distribution system. "All our materials are housed in a central location," Keitz explains, "and we have staff members who refurbish kits after the teachers return them. We can then replace any materials that are lost or broken and pass on complete kits to the next set of teachers." Since 1978, the school system has had ongoing training to help elementary school teachers make good use of the science kits. Anchorage elementary schools, Keitz says, are holding more science fairs than they did before the hands-on program began. "Our students are reacting very positively to this program. They enjoy actually doing science," Keitz notes. **Contact:** Emma Walton, Science Program Coordinator, Anchorage School District, 4600 DeBarr Ave., P.O. Box 196614, Anchorage 99519-6614; 907/269-2274.

Under **MATH / COMPUTERS,** see also **Trigonometry Meets Physics,** below.

MATH / COMPUTERS

Trigonometry Meets Physics—And It's About Time! Wichita Falls (Texas) Independent School District. **Objective:** To integrate the precalculus and physics curriculums and help students see, enjoy, and use the interdependence.

A new high school course that combines advanced mathematics and physics is making both disciplines easier to understand—and giving students a chance to do more sophisticated research. The course has rearranged trigonometry, analytical geometry, and other topics usually considered preparations for calculus so they can be learned in conjunction with physics, which relies on mathematics to solve problems. This approach has helped students in two ways, says Ruth Ann Huffhines, the school system's director of secondary curriculum. "It has tended to eliminate the time-honored question, 'What are we ever going to use this math for?' And it has lessened considerably the burden of trying to master unfamiliar problem-solving techniques while trying to apply them at the same time," she says. The course, open to honors students, uses a two-hour block of time during the school day to teach students the essentials in both trigonometry and physics and to allow time for laboratory investigations and computer-assisted instruction. To prepare for the course, the physics and trigonometry teachers who developed it took classes in each other's discipline. Money for the course came through a corporate grant and support from the school system. As part of the new trigonometry/physics course, each student developed a budget and performed extensive research for a science fair project; nine of the 14 students subsequently entered their projects at a regional science fair. The results: They won all three places in the physics category, and one student was honored as the fair's "grand sweepstakes" winner. **Contact:** Ruth Ann Huffhines, Director of Secondary Curriculum, Wichita Falls Independent School District, 1104 Broad, P.O. Box 2570, Wichita Falls, Texas 76307; 817/723-4177, ext. 232.

Parents Are Computer Partners, South Colonie Central Schools, Albany, N.Y. **Objective:** To acquaint fourth and fifth grade students and their parents with computers.

Borrowing a computer in this school system is almost as easy as borrowing a library book. A program encourages fourth and fifth graders to take a computer home and find out what it can do. Using Chapter 2 federal funds, South Colonie bought a variety of inexpensive ($100 each) computers. Interested students and parents attend a short orientation session, then they check out a computer with everything they need to connect it to a home television set; they also receive a booklet that explains how the computer works. Students can keep the computer for two or three weeks to finish the activities the guidebook describes. During the time students have computers at home, they also have access to similar computers in their classrooms. And their teachers, who have attended a computer workshop, are ready to answer their questions. "We wanted to give each child and his parents the chance to become acquainted with a computer," says Joseph Prenoveau, assistant superintendent for instruction. "I'm not promoting the purchase of computers. Part of the reason we're doing this is to give parents a no-cost look at the equipment and a foundation for deciding what a computer can do for their children." Parent reaction to the program has been "consistently positive," Prenoveau says. And he is convinced that any small school system (his has an enrollment of 5,300) could start a similar introductory program in computer education for elementary students for as little as $3,000. That figure includes start-up costs and basic maintenance. **Contact:** Joseph Prenoveau, Assistant Superintendent, Instruction, South Colonie Central Schools, 102 Loralee Drive, Albany, N.Y. 12205; 518/869-3576.

Math Focus Day, East Windsor Regional School District, Hightstown, N.J. **Objective:** To make mathematics come alive for elementary school students and to have mathematics activities that involve several grades.

"Microwave math snacks" and "pretzel addition" are only a few of the 30 activities that make mathematics a real treat for young students on Math Focus Day. Each year, the East Windsor schools sponsor a one-day special event for students in kindergarten through grade five. During the year, teachers submit ideas for workshops that make mathematics fun and exciting. Students select two workshops from a master list and participate in these workshops with students from other classes and grades. The math activities emphasize critical thinking skills, says Ellen W. Mace, mathematics content specialist. "We try to encourage teachers to do an activity that requires critical thinking," she says. "It means the teachers put out more effort and the children get more out of it in the end." In one activity, for example, students play a stock market game; they see how much money they can win or lose by buying and selling stocks. In an architectural workshop, children design their own dream homes after a brief lesson on scale. And in another workshop, children use yarn and cardboard to make geometric string designs. The costs are minimal, because most of the materials already are available in the schools. But Mace says the day requires a "tremendous amount of planning"—from getting workshop descriptions to producing final listings of those assigned to each workshop. The school system's 550 elementary students, including those in special education, participate. **Contact:** Ellen W. Mace, Mathematics Content Specialist, East Windsor Regional School District, Stockton St., Hightstown, N.J. 08520; 609/443-7827.

Mathematics Hall of Fame, New Hope Elementary School, Robbinsdale (Minnesota) Area School District No. 281. **Objective:** To improve elementary school students' basic mathematics skills.

Good mathematics skills really add up in this elementary school. Students who score 100 percent on a mastery test of basic skills are inducted into New Hope's Mathematics Hall of Fame. "Knowing computational skills is critical," says Principal Robert J. Ziegler. "We wanted to stress basic mathematics skills in a fun way and motivate students to learn their math facts." At various times during the year, students in grades one through six take basic skills tests. To qualify for the Hall of Fame, they must answer correctly from 50 to 100 test questions within a given period of time (usually about three minutes). Students may take the test as often as they want. Usually, Ziegler says, about one-third of the students pass on the first or second try; last year, 213 of the 300 students made the Hall of Fame. Ziegler finds the students are attracted to the Hall of Fame idea because they're "into football and baseball, and they like the name." The roster is a large, painted plywood board with the students' names imprinted on brass plates. Hall of Fame inductees receive wallet-size Hall of Fame cards they can carry with them or keep in their scrapbooks. Ziegler invites each student who scores 100 percent on the test to come to his office so he can offer personal congratulations. The school also sponsors an awards day ceremony at which it recognizes all the students in the Mathematics Hall of Fame. "We're giving students a basic message: The way to learn is to keep practicing what you don't know," Ziegler says. **Contact:** Robert J. Ziegler, Principal, New Hope Elementary School, 8301 47th Ave. N., New Hope, Minn. 55428; 612/533-5301.

Times Champs Multiplication Program, Paradise Valley Unified School District No. 69, Phoenix. **Objective:** To help children master the multiplication tables.

Multiplication tables are fun and exciting in this school system, where Bill Linderman, a third grade teacher, has designed a program to help students master their basic mathematics facts. Called the Times Champs Multiplication Program, it uses original songs ("The Key is to Memorize" and "Learning My Times") to motivate students. By singing the songs, the kids get in the right frame of mind for daily practice in the multiplication tables. Linderman has students take daily, timed tests until they pass three graduated levels of skills. At each level, they receive an outstanding achievement certificate. When they have learned their multiplication tables through 12 times 12, they become Times Champs. "I try to keep them on a high level of motivation," Linderman explains. "I want each child to become extremely proficient in the basic facts." Linderman produced his own material, which includes a cassette tape children can take home, under the federal block grant program. "By constantly singing the songs, the kids have a lot of fun and learn math at the same time," Linderman says. And, he continues, the program has made a big difference academically. In the first year of the program, Linderman's top group in second grade mathematics challenged the top groups in the fourth, fifth, and sixth grades. Not only did Linderman's students "successfully outscore every one of these groups in one-to-one competition in multiplication, but they also shone in computations of difficult fractions," he says. The Times Champs program, originally used only in Linderman's elementary school, now is being used in many other schools in the school system. **Contact:** Bill Linderman, Village Vista Elementary School, 4215 E. Andora Drive, Phoenix 85032; 602/996-0986.

The Times Champs of Arizona's Paradise Valley schools learn multiplication to a guitar beat.

Video Computer Instruction, Cedarhurst Elementary School, Susquehanna Valley Schools, Kirkwood, N.Y. **Objective:** To enable teachers and students to use computers more effectively.

Teachers and students who shy away from highly technical computer manuals have another option in this school: They can watch a videotape that explains, step by step, how a computer works. Principal Robert Callahan and teacher Tom McCarthy filmed the Video Computer Instruction program (V.C.I.) to train teachers to use eight different computers effectively. Says McCarthy: The program "frees the teacher from reading tedious manuals and enables him to learn about computers in his own time and at his own pace." Teachers and students use the V.C.I. program while sitting at a computer; they watch the video program on a television set connected to a videocassette recorder. The "T.V. teacher" explains about hardware and software and demonstrates how the various parts of the computer work. Later tapes in the series teach word processing and show how to use specific software. Using this system, a teacher can take a group of students into a computer laboratory, and one group of students can watch the tapes (using headphones) without disturbing the other group that actually is working on computers. Students who run into problems can play an appropriate tape on the videocassette recorder and get the answers they need. "This system frees up teacher training time and teaches students responsibility and independent learning," McCarthy explains. "Students and teachers thoroughly enjoy the system and find it beneficial." **Contact:** Tom McCarthy, Cedarhurst Elementary School, Susquehanna Valley Schools, Box 1825, Route 11, R.D. No. 1, Kirkwood, N.Y. 13795; 607/775-0170, ext. 23.

Principal's Problem of the Month, Mesa (Arizona) Unified School District. **Objective:** To increase interest in mathematics and make the principal an integral part of the curriculum process.

Once a month, every elementary school principal in this school system becomes a mathematics teacher: He gives a short lesson to students in grades four through six and then presents them with a special problem to solve. The goal of the Principal's Problem of the Month program is to give the principal a chance to do some teaching and interact with students. The school system's Basic Skills Department supplies the problems, along with complete lessons plans for presenting them to students. The problems, which are both "unusual and fun," help students increase their skills in a variety of areas, from verbal reasoning to logical deduction, says Director of Basic Skills Dennis W. Nelson. After the principal teaches the mathematics lesson and presents the problem, he gives students the rest of the month to complete it. Students are encouraged to take the problem home to work on it with their parents. Nelson says the problems are written in such a way that all students, even the slower ones, can get at least part of the solution. At month's end, each student who works on any part of the problem gets a certificate of achievement signed by the principal. Some principals even take the top five students out to lunch at a local fast food restaurant as an added incentive. The program has been "exceptionally successful," Nelson says. "It has added a new dimension to mathematics, and it has had great benefits for the principals. Because they are actively teaching, principals are seen as instructional leaders by staff members and students. Parents view the principal as one who is concerned with high-quality instruction." And the principals say they enjoy working with students and getting to know them better. **Contact:** Dennis W. Nelson, Director of Basic Skills, Mesa Unified School District, 549 N. Stapley Drive, Mesa, Ariz. 85203; 602/898-7876.

Illustrations of Mathematics in Everyday Life, Galax Middle School, Galax (Virginia) City Schools. **Objective:** To help students use critical thinking skills to understand the relationships and applications of mathematics to everyday situations.

Seventh grade students in this school design everything from box cameras to two-way radios—all in an attempt to make mathematics relevant to everyday life. The mathematics project, funded by the school board as part of a systemwide program of small grants, first asks students to find articles and advertisements that incorporate some mathematical principles. Toward the end of the year, the students create projects that demonstrate mathematical principles. Some students have designed clocks and battery-powered radios; one student built a replica of a wood-burning stove. The project has to be approved by the teacher and carefully researched. Students follow a detailed, step-by-step outline and supply a cost estimate and materials list. Completed projects are displayed at an open house, where students explain why they selected their projects, what problems they encountered, and how they solved those problems. The projects not only help students improve their mathematical skills, but they also teach the youngsters to follow guidelines, says teacher Barbara Chapel. Planning, completing, and presenting their projects also builds students' confidence: "The increased self-esteem the students exhibit is worth all the effort," she says. "They are so happy with their successes." **Contact:** Gayle L. Keith, Associate Principal, or Robert O. Harrison, Superintendent, Galax City Schools, 223 Long St., Galax, Va. 24333; 703/236-6124 or 703/236-2911.

Comprehensive Mathematics Curriculum, School District of Greenville County, South Carolina. **Objective:** To provide a continuous program in mathematics for students of all ability levels.

This school system's mathematics curriculum has improved student test scores at all levels and has increased the number of students in advanced programs. Concerned that test scores generally were low, the staff set out in 1978 to develop a systemwide, comprehensive curriculum to improve the teaching and learning of mathematics. "Before we had this program, there really was no program," says Mathematics Consultant Eloise L. Rudy. "Teachers were teaching from textbooks, but without standards and guidelines. From the beginning, I envisioned a continuous program that would accommodate every student." The curriculum has a number of special features: a program at all grade levels for students with below-average abilities, and at the other end of the spectrum, advanced placement calculus in every high school for students with above-average abilities. Rudy says continuous testing makes

certain that students are meeting the educational objectives. The school system records the progress of each of its 52,000 students. It also offers teachers tuition-free graduate courses and continuing programs to upgrade their skills in mathematics instruction. The results: "We've made steady progress each year. Our math scores keep improving, and this past year, we made a big leap at every grade level," says Rudy. "We're now far above national and state norms." She says the Greenville curriculum is being used by a number of other school systems in the state that cannot afford to overhaul their own curriculums. "Some have used the curriculum exactly as written, and others take it as a starting point," she says. The curriculum, which costs $120,000 annually for materials and supplies, is "not an expensive program to maintain. Considering the number of students in the district, we do it on a very small budget," says Rudy. **Contact:** Eloise L. Rudy, Mathematics Consultant, School District of Greenville County, 301 Camperdown Way, P.O. Box 2848, Greenville, S.C. 29602; 803/242-6450.

Under **LANGUAGE ARTS,** see also **Writing on Computers,** page A5.

Under **LANGUAGE ARTS,** see also **Computer Communication Laboratory,** page A5.

Under **MUSIC / ARTS,** see also **Computer Graphics in the Art Classroom,** page A16.

SOCIAL STUDIES

History, Art, and Music, Jackson-Milton Middle School, Jackson-Milton Local School District, North Jackson, Ohio. **Objective:** To give students insight into their heritage by correlating the teaching of American history with art and music.

Students in this middle school classroom are arguing so heatedly over the issue of slavery that their teacher has to intervene. "Remember," he tells them, "this is not *really* the Civil War." But their excitement is a sign of the degree to which a special interdisciplinary course is making the past come alive. History, Art, and Music, a yearlong course for eighth grade students, uses American art and music to deepen students' understanding of history. The course deals with American history from the Colonial period through the 1970s. If students are studying the Revolutionary War, for example, they do research papers to find out about both the American and the British positions on the war; then they debate the issues. In art, they study Colonial artists. And in music, wearing appropriate costumes, they dance the minuet at the "governor's ball." The course really "gives them insight into our past, and that insight will help them deal with the future," says program coordinator John P. Gulgas, who also teaches the history component of the course. "They learn that people in the past are just that—people, who . . . had many of the same problems and issues to cope with that we have now." The course started in 1978 with a $2,000 state grant. Money from a foundation enabled Gulgas and the two other teachers who work with him to expand and modify the course to deal with contemporary problems. Toward the end of the school year, for instance, students confront the nuclear age: They are told that a nuclear missile, aimed at Washington, D.C., has been launched accidentally by another superpower. The students, taking the roles of the President and his advisers, must decide whether to retaliate and whether to evacuate the city. "That discussion gets a little hot, too," Gulgas says. "We can see that students have gained a greater insight into history than would have been possible with a more traditional approach." **Contact:** John P. Gulgas, Program Coordinator, Jackson-Milton Middle School, 14110 Mahoning Ave., North Jackson, Ohio 44451; 216/538-2257.

Amigos, Columbus Elementary School, Appleton (Wisconsin) Area School District. **Objective:** To help students develop an awareness of the lands, people, and history of Latin America by engaging them in a simulated race through the various countries.

From a starting point in Texas, students in a sixth grade class "race" to Tierra del Fuego at the southernmost tip of South America. Actually, of course, they don't leave their Wisconsin classroom, but the simulated journey teaches them the history, geography, and culture of the lands through which they travel. Teacher Nancy Ranes, who developed the Amigos project, divides the race into three rounds: Round One takes students through Mexico and Central America, Round Two through the West Indies, and Round Three through South America to Tierra del Fuego. To prepare for each round, the sixth graders are divided into teams that research and write fact sheets for each country involved. Then they complete maps and prepare short reports and projects. In each round's second part, students race through the countries by using their new knowledge to answer questions. Each team's progress is recorded on a large bulletin-board map of Latin America. The winners of each round earn special privileges or rewards, and at the race's end, there's a class fiesta. Parent volunteers prepare food, and students participate in games, music, and dancing. "The kids learned tremendous amounts and did a lot of work and research," says Ranes. "I used to hear them quizzing each other. It is so much better than learning from textbooks." During the course (which lasts from 12 to 15 weeks), Ranes also invites guest speakers to talk to the class. Example: "We had a Spanish teacher talk about Peru and the life of a sixth grader in that country." As a result of the Amigos project, Ranes reports, students are more interested in reading newspaper articles about Latin American countries. "Parents were astounded at how much their kids knew," she says. "The students really began to understand different cultures and to become aware that there is a world outside their own." **Contact:** Nancy Ranes, Columbus Elementary School, 913 N. Oneida St., Appleton, Wis. 54911; 414/735-6232.

Real Life, Dyer Elementary School, Esmeralda County Public Schools, Dyer, Nev. **Objective:** To show children the realities of the adult financial world using activities with play money.

This elementary school is using money to teach students responsibility and motivate them to work hard. The money isn't real—it's printed by computer—but it's teaching real-life lessons and giving students extra skills in

mathematics, economics, and social science. Students in Mary Jane Fulgham's sixth, seventh, and eighth grade classes earn their moola in various ways. Students apply for class jobs, which range from class banker to bathroom monitor, by submitting resumes. Pay varies according to the job, and Fulgham issues monthly paychecks for the work done—minus 10 percent for taxes and a "modest insurance fee" to protect students from loss of income due to absences. Students also are docked if their assignments are messy or late. After students get their checks, they pay rent for their school desk "offices." Students would have to sit on the floor if they don't pay their rent, Fulgham says. After the rents have been collected, the class holds an auction; students use their money to bid on items brought in by Fulgham and their classmates. This year, Fulgham plans to let students buy phony stocks and bonds. Fulgham contends that schools rarely prepare their students for the real world. But her students are learning how to write checks, balance checkbooks, make savings deposits, and compute interest; they also are learning that you have to work for your money and handle funds carefully. Some students have become quite savvy about money, she adds. "I've made a few errors calculating their paychecks, and the kids have nailed me to the wall." **Contact:** Mary Jane Fulgham, Dyer Elementary School, P.O. Box 104, Dyer, Nev. 89010; 702/527-3250.

Craftsmen in the Cafeteria, Irving (Texas) Independent School District. **Objective:** To preserve cultural heritage by introducing young people to older people and their crafts.

Students who've never heard of tatting or who think that shoemakers really use elves are learning about traditional crafts in the Irving schools, where the Craftsmen in the Cafeteria program gives elementary school students a closer look at their cultural heritage. The program brings retired people to school to share their skills, their crafts, and their stories. The visitors demonstrate tatting (making handmade lace), quilting, weaving, woodworking, and other crafts that "people no longer take the time to learn to do in this modern era," says art consultant Irene Norman, who started the program. The children do not participate in the demonstration, but they watch, ask questions, and see a finished product. "One kindergarten student asked a shoemaker where his helpers, the elves, were," Norman relates. "Another student wanted to know if a quiltmaker could make electric quilts." Before they come to the demonstration, students get a briefing from their teacher, who provides a biography of each volunteer and a description of his craft. The volunteers hear about the program through word of mouth, although Norman occasionally contacts senior citizens' groups to ask for participants. "It's a good program for the older people, as well as for the students," Norman says. "They have so much to share. They are part of a heritage that modern technology has replaced with machines." The program, which costs the school system nothing to run, has had an added benefit: Students have become more interested in their families, especially their grandparents, Norman says. "Now children ask their grandparents all sorts of things. They feel a closer bond, and they can see how valuable the older generation is." **Contact:** Irene Norman, Art Consultant, Irving Independent School District, 901 O'Connor St., Irving, Texas 75060; 214/259-4575, ext. 229.

Consumer Education, Deer Path Junior High School, Lake County School District No. 67, Lake Forest, Ill. **Objective:** To give students a knowledge of economics that will help them meet their responsibilities as participants in the private enterprise system.

Teacher James Peck tells his eighth grade students to imagine this scenario: "You're 18 years old and want to move out on your own. You have clothes and some household goods but no car, stereo, or savings. You've just taken a job as a secretary, and you earn $17,200 a year after taxes and other deductions. Now," he says, "make a year's budget. Figure how much an apartment, transportation, food, clothing, recreation, medical insurance, and other things will cost. Start a savings account, make a major purchase on credit, and see what you have to do to take care of emergencies—if your rent is raised or your apartment is damaged." This nine-week consumer education program, part of the social studies curriculum, quickly teaches students about the "real world," Peck contends. "They get the biggest shock of their lives when it comes to clothing costs." Peck started the course to meet state-mandated requirements for consumer education and to introduce students to some of the financial realities of the working world. "Ninety-nine percent of the students finish the project without any problem," Peck says. "My door is always open for the kids to come by and get help. But I do keep changing the variables right up to the end, because kids have to learn to plan for surprises. That's the way it is in real life." The project, he adds, has changed some student attitudes about the future. "Many of the students have decided they want to go to college after all. Those who still want to get out of school have different ideas of what they want to be." They know they'll find it hard to live on $17,200 a year. **Contact:** James Peck, Deer Path Junior High School, 95 W. Deerpath Road, Lake Forest, Ill. 60045; 312/234-6010, ext. 136.

Global Awareness Is Now, Amboy-Good Thunder Schools, Amboy, Minn. **Objective:** To help students and staff members become more aware of a rapidly changing world.

This tiny, 131-student school system is thinking big: It is teaching global awareness to its ninth grade students. "The world is rapidly changing," explains Superintendent Patricia Mohn, who also serves as high school principal. "We want our students to be prepared adequately to live and work in a totally interdependent world." The school system's GAIN program (Global Awareness Is Now) devotes two weeks a year to helping students understand world change. Working together, all ninth grade teachers choose a focus for interdisciplinary study. If the focus is on the Soviet Union, for example, they might have students read Boris Pasternak's *Dr. Zhivago* or see the movie version of the novel in their language arts courses. In mathematics, the students could study the Soviet Union's currency, economics, population trends, and trade and exchange rates. Music courses could focus on folksongs and anthems as expressions of Soviet society. Students

also learn to fill out a passport, choose a place they want to visit, decide how to get there and what to see when they arrive, and imagine what it would be like to live in another country. The school system also brings in faculty members from nearby Mankato University for lectures and discussions and encourages special projects. (One class activity included a miniature Olympics ceremony.) The GAIN program cost $6,000 to start up in 1986, but the budget goes down each year, Mohn says. And for a modest cost, the program broadens students' perspectives. "Students are more interested in other nations and in the diversity of the human situation," she says. "The skills and knowledge they gain in this concentrated program will have ramifications beyond the program itself." **Contact:** Patricia Mohn, Superintendent, Amboy-Good Thunder Schools, P.O. Box 96, Amboy, Minn. 56010; 507/674-3045.

Motor Mouth Contest Geography Unit, New Plymouth Elementary School, New Plymouth (Idaho) Public Schools. **Objective:** To teach students to read maps and help them identify states or countries in a specific region.

Not sure whether Nebraska is north or south of Kansas? Just ask the students in teacher Lori Ybarrondo's fifth grade class: They're likely to know the answer—and the names and locations of all 50 U.S. states. Ybarrondo teaches a five-week geography unit that revolves around a large wall map containing no state names. Students learn the state names slowly, region by region, and do activities and puzzles dealing with the specific group of states they are studying. At the end of the five-week period, Ybarrondo conducts a Motor Mouth Contest: Students have three chances to reel off the names of the 50 states, in the order taught, in 30 seconds or less. (Last year's first-place winner managed to name all the states in 11½ seconds.) Ybarrondo videotapes the students, and afterward, parents are invited to a Motor Mouth Feast where they watch the videotape and sample foods popular in different geographic regions of the U.S. The contest seems to have lasting effects: "Students from previous years still come in and tell me how much they enjoyed the contest and that they still remember the names of the states," Ybarrondo says. She notes that the geography unit and the Motor Mouth Contest can be adapted to other grade levels to teach the names, locations, and spellings of foreign countries. **Contact:** Lori Ybarrondo, New Plymouth Elementary School, P.O. Box 388, New Plymouth, Idaho 83655; 208/278-5334.

Practical Law, Miami High School, Miami (Arizona) Unified School District. **Objective:** To give students a basic understanding of their rights and responsibilities under the U.S. system of government.

A practical law course in this high school is training students to understand and take part in a democratic society. Developed by teacher John V. Yanez, the course began as an experimental class that covered civil and criminal law. It now is a one-year elective for juniors and seniors that also examines individual liberties and juvenile, family, and consumer law. Students need a practical understanding of law because it is around us from birth to death, says Yanez: "They need to know both their rights and their responsibilities." One of the most successful parts of the course has been its reliance on people in the community, he notes. Police officers, detectives, judges, border patrol agents, and other professionals visit the classroom and give students firsthand information about the U.S. system of justice. Yanez takes his students into the community to see the law in action. They visit city and county jails, juvenile correction facilities, the courthouse, the city council building, and the state capitol. The practical law course also features a mock trial. Working with superior court personnel, students stage a trial at the high school or the courthouse. The students, who are briefed and trained in trial procedure, have entered the statewide mock trial competition and competed in the state finals. **Contact:** John V. Yanez, Miami High School, Miami Area Unified Schools, P.O. Drawer H, Miami, Ariz. 85539; 602/425-3271.

Free Enterprise Unit, El Sierra School, Downers Grove (Illinois) School District No. 58. **Objective:** To help students understand the free enterprise system by participating in a business venture.

Remember that plucky neighborhood kid who sold lemonade every hot summer day? Well, at El Sierra School, there's a whole class of young entrepreneurs. As part of a third and fourth grade economics class, students at this elementary school create and run their own businesses to help them understand the free enterprise system. They begin by studying the language and principles of business. Working cooperatively, they then design products they believe will sell, negotiate a small loan (from the principal or the P.T.O.), manufacture the product, write and perform commercials, and sell their product at school. One group, for example, made and sold chicken soup. "They made up a song, wore chefs' hats, and encouraged students and staff to buy the soup with their lunch," says Marilyn J. Kjelstrom, the teacher who devised the project. The unit teaches a number of skills in several subject areas: reading, writing, mathematics, social studies, and art. It also teaches students to work cooperatively toward a common goal. "We encourage the children to settle any disputes on their own," Kjelstrom says. "Most of the time, they come up with solutions." Sometimes, the children have to deal with flops. "We've had some failures, some companies that didn't make a profit, and the kids had trouble paying back the loan. But that was a learning experience, too. They had to figure out what to do with a not-too-successful product," she says. Generally, though, the accounting books the students keep have shown a profit, and students have had to decide what to do with the money they've earned. In the past, students have used the money to buy school equipment or have contributed it to charity. The unit takes a lot of classroom time and support from parent volunteers, Kjelstrom says, but the results are significant. **Contact:** Marilyn J. Kjelstrom, El Sierra School, 6835 Fairmount, Downers Grove, Ill. 60516; 312/719-5825.

Getting to Know Sussex County, Marian Emmons McKeown School, Hampton Township Schools, Newton, N.J. **Objective:** To get parents involved in learning with their children and help children learn more about their community.

This elementary school has found a better way than

field trips to get students out and about: It invites parents and children to take a trip together within the community and share their experiences with the class. Each year, as part of her third grade social studies curriculum, teacher Charlotte Voight asks parents to participate in a Getting to Know Sussex County program. Voight sends parents a long list of places to visit—from farms and state parks to a rubber company. (Students whose parents cannot participate in the program are given another assignment to do in class.) During the site visit, students take pictures and interview people. Their goal is to create a project that can be described to other parents and students during an annual Sussex County night. Parents can help as much or as little as they want with their child's project, which could be a scrapbook, video, diorama, or report. "The program has been in operation for several years, and every year, more parents attend the annual meeting. This year, 46 out of 48 children participated," Voight says. Another benefit of the program is its effect on family life. "The project gives children and parents time together," Voight says. "There is sharing and excitement about each project." **Contact:** Charlotte Voight, Marian Emmons McKeown School, Hampton Township, R.D. No. 4, Box 192, Newton, N.J. 07860; 201/383-5300.

Just in Time, Westby High School, Westby (Wisconsin) Area School District. **Objective:** To teach students a Japanese method of manufacturing that emphasizes accuracy and reliability.

Dennis Smalley is teaching his technology education students a Japanese method of manufacturing called Just in Time—and he's doing it just in time to help his students understand the competitive nature of the business world. "The Japanese have had little trouble learning our techniques," he says. "We need to take notice of things that work and apply or modify them to make America more productive." Just in Time, also called stockless production, entails maintaining very low inventories: Parts arrive just in time for production and distribution to retail outlets. The ideal, Smalley explains, is to make one item just in time for the next operation and to keep all materials active. That way, no carrying charges collect for large batches of materials in storage, and there are few, if any, defects; workers cannot simply throw away a "mistake" and reach for another part. To demonstrate the system, Smalley has his tenth grade students produce a wooden toy airplane made of several simple parts. Two other small, rural high schools work with Westby students, who select the necessary parts and send plans for the parts to the two schools. While the other schools start production, Westby students are busy working on sales, pricing, advertising, and three small production lines. "We simulate industry rather well," Smalley notes. "We are forced to overcome the same problems—late deliveries, part defects, and poor workmanship—that industry faces." When Westby students have problems with deliveries, they get on the telephone. "Since one student's job relies on another's, students have to work very closely together," Smalley says. The results: Last year, Westby High School completed and sold 90 airplanes, making a profit for all the schools involved. And the students, who evaluated the program, "unanimously approved," Smalley says. "They thought it was great being the hub of an organization and working with other schools." **Contact:** Dennis Smalley, Technology Education Instructor, Westby High School, Westby Area School District, 206 West Ave. S., Westby, Wis. 54667; 608/634-3101.

Under **SCIENCE / TECHNOLOGY,** see also **Man Curriculum,** page A8.

MUSIC / ARTS

Computer Graphics in the Art Classroom, Charles M. Russell High School, School District No. 1, Great Falls, Mont. **Objective:** To explore new technology and its relationship to the creative process.

When students at Russell High School go to art class, they do more than reach for their brushes and oil paints. They also use a computer the art department has integrated into its traditional curriculum. The computer gives students a sophisticated tool they can use to explore ideas and try out design concepts. For example, the computer makes short work of repeating patterns or changing sizes, allowing students to find out quickly which designs work best. "This instant planning ability saves time, materials, and effort," says Anita Ronning, chairman of the art department. Used in combination with graphic design, photography, printmaking, drawing, and sculpture, the computer helps students in beginning art workshops as well as those in more advanced studio classes. Graphic arts students, for example, use a software program for lettering and layout; other student artists have developed simple animation using another software program. Enthusiastic about the computer from the start, the students have used the machine to help them generate ideas and arrive at creative solutions to design problems, Ronning says. She also contends that the computer will help her students become "better prepared for a highly competitive job market in commercial art as well as in fine arts." **Contact:** Anita Ronning, Art Department Chairman, Charles M. Russell High School, 228 17th Ave. N.W., Great Falls, Mont. 59404; 406/791-2387.

Music Memory, Austin (Texas) Independent School District. **Objective:** To give students a knowledge of their musical heritage.

Can't identify that tune? Just ask any elementary school student in this school system: He probably not only can name the piece of music but can tell you who composed it. Music Memory, based on a national program of the same name that was popular in the 1920s, attempts to acquaint students in grades three through six with some of the best-known music and composers, from Gregorian chants to Aaron Copeland and beyond. Between September and February, 15,000 children in Austin's 54 elementary schools study 16 musical compositions—one a week—in their music class. Students can also check out library packets with cassette tapes for home listening, and they can hear the week's selection several times in the course of the week on a local radio station, says Mollie Tower, coordinator of elementary music and founder of the program. The months of study culminate in three contests conducted in March, when students are given a multiple-

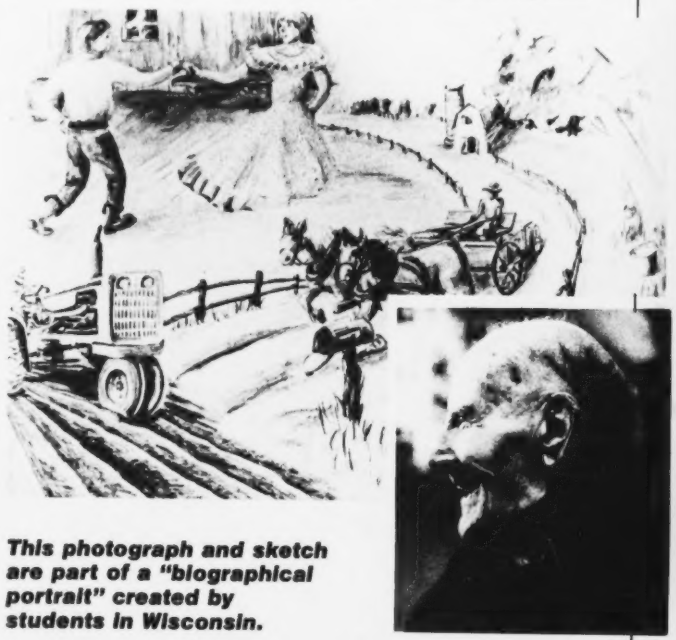
choice listening test. The results: Eighty percent of all students score 70 percent or higher on the 20-item test. The 20 percent who score a perfect grade on the first test are tested again. From the results of this competition, six students are chosen to represent each school at the All-City Music Memory Contest conducted at the University of Texas. There, students hear a live orchestra and a choir perform brief excerpts from the music they've learned; they are asked to write the name of each composition and its composer. After the papers are graded by computer, individuals and school teams receive awards. The program has become so popular it has spread to 600 other Texas school systems, as well as school systems in 23 other states and three foreign countries, Tower says. **Contact:** Mollie Tower, Elementary Music Coordinator, Austin Independent School District, 6100 Guadalupe, Austin, Texas 78752; 512/451-8411, ext. 253.

Critical and Creative Thinking Skills in Music, Needham (Massachusetts) Public Schools. **Objective:** To incorporate critical and creative thinking skills into music classes and rehearsals.

Music has more than charms to soothe a savage breast. It also can help students think more critically. The music department in this school system has devised a new curriculum emphasizing 15 different thinking skills, explains Music Director Mildred B. Beane. She says the project "has energized teachers who had grown a little tired and has given the music department new respect." Music already has a solid place in Needham's curriculum, with every student in grades one through five required to take music twice a week. But now, Beane says, rather than simply learning the names of musical instruments, students learn classifying. "We would show a trumpet and a snare drum, and let the student discover the characteristics of these instruments, what's the same about them and what's different," she explains. "The children end up developing their own criteria for what makes a brass or a percussion instrument." Besides the emphasis on discovery rather than memorization, the curriculum also gives students a chance to be creative. In one exercise, for instance, children create an original piece of music, but not with traditional instruments. "They can drum their fingers on the desk or bang on pipes," Beane says. "They can draw figures to indicate whether the music should be played softly or loudly. One child created a musical composition that sounded like a storm. The other children spontaneously understood from the circles and triangles he had drawn when the raindrops changed to thunder and heavy rain." At more advanced levels, students might listen to two recordings of the same piece of music and compare performances. **Contact:** Mildred B. Beane, Director of Music, Needham Public Schools, 1330 Highland Ave., Needham, Mass. 02192; 617/444-4100, ext. 116.

Biographical Portraits, Lincoln High School, Wisconsin Rapids (Wisconsin) School District. **Objective:** To create mixed-media works of art that draw on the experiences of elderly people.

The old and the young often live in separate worlds. Believing that art can create a bridge between these worlds, Jeffrey Johannes, a visual arts instructor at this high school, devised an unusual art project: Using painting, poetry, and photography, his students created "biographical portraits" of elderly residents of a nearby nursing home. Six groups of three students (a poet, an artist, and a photographer) visited six nursing home residents ranging in age from 74 to 97. While the artist sketched and the poet took notes, the photographer captured the old person on film as he recalled his youth, talked about good times and bad, and gave advice to the students. The photograph, the poem, and the drawing or painting were framed together



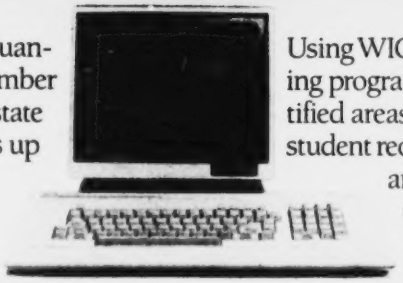
This photograph and sketch are part of a "biographical portrait" created by students in Wisconsin.

as a biographical portrait. An exhibit of the six portraits appeared in the local library for two weeks. And copies made by Johannes for the subjects were exhibited in the nursing home. In devising the project, Johannes says his primary goal was to integrate the arts and to show students that all the arts have a "common denominator, a linking thread." He chose old people as the subject because "old age is something we will all confront in ourselves and in our parents," he explains. The senior high school students, who volunteered to visit the nursing home several times after school, were a "a little scared at first," Johannes acknowledges. "Walking into a nursing home and seeing people in all conditions of health can be an eye-opening experience." Johannes also was concerned that the elderly people might be afraid of being asked something they could not remember. "But the whole experiment really took off; there were tears and laughter," he recalls. One of the residents died shortly after she was interviewed, Johannes says, "but she was able to hear the poem the student had written about her, and she was very moved." **Contact:** Jeffrey Johannes, Lincoln High School, 1801 16th St. S., Wisconsin Rapids, Wis. 54494; 715/423-1520, ext. 187.

Monthly Music Guides, Great Falls (Montana) Public Schools. **Objective:** To assist classroom teachers in giving every elementary school student the chance for a positive experience in music.

Although music generally is a part of the elementary

Students' Reading Per

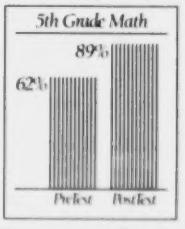


In Pharr-San Juan-Alamo, Texas the number of students passing state learning objectives is up 43% in fifth grade math. It's climbed 47% in fifth grade reading. And if 45% is a climb, the LEP fifth grade writing score *leaped*–a remarkable 277% –all after just one year of using WICAT Learning Centers.

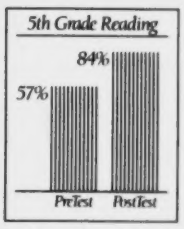
These remarkable improvements resulted from PSJA's district-wide learning improvement strategy. Using WICAT's on-line testing program, teachers identified areas in which each student required remediation and then placed them in the appropriate prescription. (Tests on GarzaPena students, for example, showed they needed extensive work in measurement concepts.) WICAT also provided the correlations to state mastery objectives as it does in other states.

But this story is more than one of improved learning. It's also one of significantly changed student attitudes.

"Everyone has experienced the good feelings that come from excelling," reports Gracie de Leon, Whitney's Lab Manager. Teachers say kids are much more attentive in class. "They're into it, they're totally immersed," said Director of Secondary Education Jack McKeever.



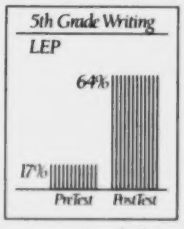
formance Jumps 47%.



And attendance on lab day has shot up. (One Whitney student who became ill made his mother wait until lab was over before he'd let her take him home. And Whitney kids actually booed when a fire drill interrupted lab.)

This enthusiasm actually began much earlier. From the beginning, the district was sold on WICAT's unmatched comprehensiveness—from the curriculum's full scope and sequence matched to leading texts, to its complete reporting abilities.

They were impressed that 32 different students could work on 32



different lessons simultaneously, from remediation to enrichment, backed with over 2,500 hours of instruction.

And they were even more impressed when they discovered students "doing in 45 minutes what would take two hours in class," as de Leon observed.

No wonder the district is ordering more systems. No wonder they've enjoyed the same test score leaps that WICAT Learning Centers are helping produce nationwide. And no wonder when a firebell rings down here, kids boo.

If you'd like more of your tests to come back positive, write or call WICAT Systems, 1875 South State Street, Orem, UT 84058.

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school curriculum, many teachers aren't trained in music and don't feel comfortable teaching it. Result: Early music instruction can start off on the wrong note. To help, Bill Larson, the music supervisor in this Montana school system, devised Monthly Music Guides that encourage classroom teachers to include music in their weekly routines. Each week, a music specialist from the school system visits every elementary school classroom for 30 minutes. But, Larson explains, "We recommend 90 minutes of music instruction a week, so the classroom teachers are responsible for the remaining 60 minutes. These guides help them continue with the music ideas and concepts that the specialist has introduced." The guides, which contain definitions, suggestions for musical selections teachers can play, and exercises and quizzes for the students, also help the teachers use "music in an interdisciplinary way." In addition, during the year, the music department has special times when music specialists work closely with classroom teachers. Using the Monthly Music Guides has been a success, Larson says. "We have noticed a marked increase in classroom teachers' attempting to teach music and improved cooperation between the specialist and the classroom teacher. . . . Students enter junior high school with an awareness of the musical concepts outlined in our curriculum and a desire to continue." **Contact:** Bill Larson, Music Supervisor, Great Falls Public Schools, Administration Building, P.O. Box 2428, Great Falls, Mont. 59403; 406/791-2230.

Music for Special Education, Hamilton High School, Milwaukee Public Schools. **Objective:** To help special education students develop a love and understanding of all types of music.

A music program is helping special education students in this high school reach a high note of pride and accomplishment. Some 30 mentally retarded and autistic students sing in a chorus and perform stylized movements to music ranging from current hits to old favorites, explains Marilyn Bartel, the teacher who directs the chorus. "Our goal was to help students learn to love and understand music. Along with learning, the chorus has given these students self-esteem and a sense of accomplishment." The chorus has performed at school functions and at community conferences, banquets, and Christmas parties. To learn the music, students take a daily class. "We teach the story behind each song and explain what geographic area the song came from," Bartel says. "We show the students pictures that go along with the song." The students also learn precise hand movements to accompany each song. "The kids are so fired up that the teachers get enthusiastic. They work so hard they don't even realize how much they are learning," Bartel says. The performances frequently receive standing ovations: "Students whistle, shout, and clap." And as for the special education students, they "walk a foot taller." **Contact:** Marilyn Bartel, Hamilton High School, 6215 W. Warnimont Ave., Milwaukee 53220; 414/541-7720.

A choir for special education students at Hamilton High School in Milwaukee performs with gestures.

Young Playwrights' Festival, Westport (Connecticut) Public Schools. **Objective:** To encourage students to use their own experience to create a play.

This school system knows, as Shakespeare did, that all the world's a stage: It sponsors an annual student playwrights' festival to encourage creative writing. Any student younger than 19 living in the state can submit an original play to a panel of judges. Student actors perform the winning entries during a festival night, and winners receive certificates worth $50 (runners-up receive book awards). "I believe the whole genre of playwriting has been neglected in America," says Jerry Brooker, chairman of the English department at Staples High School and a cofounder of the program. "But playwriting improves students' writing skills in ways not usually possible. Students draw on their own life experiences. It's the most authentic kind of writing kids can do." To help run the contest and produce the plays, which are usually 15-minute, one-act plays with small casts, the Westport Arts Center gives a $500 grant, and Brooker acknowledges his community is in an especially good position to support the festival. His advisory board, for instance, includes actors Keir Dullea and Joanne Woodward and playwright Arthur Kopit. Staples High School has long had a theater group that can produce the winning plays. "A lot of our machinery was in place," he says, "but many school systems could do this." Brooker says the festival is worth the effort: "Seeing a play produced is what generates so much enthusiasm." **Contact:** Jerry Brooker, English Department Chairman, Staples High School, 70 North Ave., Westport, Conn. 06880; 203/222-1209.

Under **SOCIAL STUDIES,** see also **History, Art, and Music,** page A13.

HEALTH

AIDS Education Project, Suffield (Connecticut) Public Schools. **Objective:** To inform all high school students about Acquired Immune Deficiency Syndrome (AIDS), giving them time to ask questions and share their concerns.

A special health education program is giving high

school students in this school system the facts about AIDS. The school system wanted to tackle AIDS education because, according to Rebecca Gibson-Laemel, K-12 life education coordinator, AIDS "has become a topic of conversation in the hallways and at home." Says Gibson-Laemel: "I wanted to provide an education that would be accurate and would allow time for student questions." The short-term project, developed last year, has three objectives: to help students understand the AIDS virus and its ability to kill; to teach the ways the virus is transmitted; and to teach students how to protect themselves from it. The teachers use charts and a movie, *Sex, Drugs, and AIDS*, to explain the disease. "The movie came out and said what everyone was thinking about but didn't talk about," says Gibson-Laemel. The school system also scheduled groups of students, usually 30 at a time, to meet with the health teachers and the school nurse for further questions and discussions. "We now have an informed student body," says Gibson-Laemel. The program, which won support from the school board, administrators, and various advisory groups, also was well accepted by parents. Gibson-Laemel notes that "not one student was removed from class, several parents thanked us for opening up the topic, and one parent was glad that 'for once, education isn't behind the times.' " **Contact:** Rebecca Gibson-Laemel, K-12 Life Education Coordinator, Suffield Public Schools, 260 Mountain Road, Suffield, Conn. 06078; 203/668-7328.

Senior Level Health Education, Cold Spring Harbor High School, Cold Spring Harbor (New York) Central School District. **Objective:** To provide facts and improve skills and attitudes so students can make informed health decisions.

Do you drink alcohol? Do you wear seat belts? Such questions are helping students in this high school find out how healthy they are and how they can live healthier lives. As part of a health education course, teacher Beverly Berkin gives a computerized, 50-question "health risk assessment" covering weight, nutrition, exercise, and sleep habits; drug and alcohol use; and other health topics. The assessment is entirely confidential—not even Berkin knows which results belong to which students. Individual students can, however, discuss their test results, if they choose to, with the health teacher. Each student then designs a health self-improvement project—to lose weight, get in shape, reduce stress, and so on. "Invariably, some of the projects involve drugs," Berkin says. "Students want to reduce marijuana smoking or alcohol consumption. A few, usually boys, will try to stop chewing tobacco." Because of the personal nature of some of the goals, the students submit confidential papers. The projects are graded, but the major criterion for a grade is a "student's efforts to achieve his goals," says Berkin. "I want to know if the student accomplished his goals and how he felt about it. If not, I ask why he was unsuccessful and what actions he can take to achieve success." The program's goal, she says, is to help students establish good attitudes and habits that will "endure for life." She asks students to evaluate the personal health assignment. "Many students have told me it was one of their meaningful assignments." **Contact:** Beverly Berkin, Cold Spring Harbor High School, Cold Spring Harbor, N.Y. 11724; 516/692-8600.

Cardiovascular Disease Awareness and Prevention, Port Washington High School, Saukville School District, Port Washington, Wis. **Objective:** To help students understand the risk factors in heart disease and develop a healthy life-style.

Ninth grade students in this high school are being screened for high blood pressure and elevated cholesterol levels as part of a health course that puts a strong emphasis on preventing heart disease. "It's very important for students to understand the risk factors for this disease and to realize that a change in life-style could postpone or even eliminate this illness," says Ron Borkowicz, chairman of health education. To screen the students, Borkowicz had technicians from the local hospital come to the high school. "The students paid $12 for the cholesterol testing, about half the normal price. Everything else I got done free," he says. Student nurses, for example, gave skin-fold tests to determine each student's level of obesity. Borkowicz tested the blood pressure of the ninth graders. The tests, Borkowicz says, were not for diagnostic purposes but to make students aware of some health risks they might be facing. The course also includes discussions of the roles diet, exercise, and smoking play in heart disease. The students took a national examination on heart disease at the end of the course, and the mean score was near the 91st percentile—30 points higher than the score in a pretest Borkowicz had administered. He is pleased to hear students say they're watching their diets, exercising more, and urging their parents to stop smoking. **Contact:** Ron Borkowicz, Chairman of Health Education, Saukville School District, 427 W. Jackson St., Port Washington, Wis. 53074; 414/284-5569.

CLYDE (Children Learning Your Drug Education), West Jacksonville Sixth Grade Center, Duval County Public Schools, Jacksonville, Fla. **Objective:** To help prevent drug abuse by sharing facts with students.

Clyde, an inflatable skeleton, has become the symbol for this school's campaign against drug abuse. The project is aimed at fighting drug abuse with facts. "We feel it is never too early to teach children about drug and alcohol abuse," says Principal Evelyn B. Anderson. "The best way to fight drug use is to begin prevention efforts before children start using drugs. The success of our program is in providing children with knowledge and good examples." The school, a one-year center for both kindergarten and sixth grade, held several rallies against drug abuse last year. At the second rally, students met Clyde and were told he died of a drug overdose. Students became members of Clyde's Club, a drug information and prevention group whose only membership requirement is that students state, "I can say No to drugs." The club meets regularly, either as the entire student body or in individual classroom chapters. School staff members also put together a comprehensive program, tied to the school's health curriculum, that helps prevent drug and alcohol abuse. Sixth grade teachers, for example, made posters and developed drug information booklets. Kindergarten teachers had their students make puppets to be used in presenting an antidrug message. Parents are eligible to join Clyde's PEP (Parents Educating Parents) Club. Parents who do so, says Anderson, are making a commitment to help their children say No to drugs and

assist other parents in learning the facts. Says Anderson: "Children see Clyde in the hall and remember the dangers of drugs." **Contact:** Evelyn B. Anderson, Principal, West Jacksonville Sixth Grade Center, 2115 Commonwealth Ave., Jacksonville, Fla. 32209; 904/354-2360.

Health Education, Osseo-Fairchild Schools, Osseo, Wis. **Objective:** To help students achieve a healthy life-style.

"A sound mind in a sound body" is more than a precept in this school system; it's a reality. A health education program that emphasizes "wellness" is teaching students the value of being mentally and physically healthy. "I believe health education is as critical as English or mathematics," says Tom Kidd, coordinator of health education for the school system. "It really is the foundation of the education process. If a student can't handle depression or illness, he'll care less about his studies." The school system has a required health course for seventh grade students and several electives for those in high school. The required course deals with a variety of issues: mental health, family life and reproduction, drug and alcohol use and abuse, and environmental and community health. Kidd, who teaches the course, asks students to develop a personal health plan to follow in high school and as a foundation for healthy living throughout their lives. Because some of the issues the health class raises are personal and sensitive, Kidd has an "open day" during which students submit unsigned questions about issues that worry them. In high school, students can elect health courses ranging from safety and first aid to more advanced courses on human anatomy and physiology. Students who are considering careers in teaching, counseling, or in the health professions participate in special peer-education programs: They tutor junior high school or special education students and help run the Student Assistance Program, support groups for students in grades seven through twelve. The support groups meet weekly to talk about what's worrying members and to encourage behavior conducive to good health, Kidd says. "I've seen students change in a very positive direction in the ten years I've been here," he reports. "There's been a reduction in alcohol consumption and a decrease in illegitimate pregnancies. Students are more willing to ask for help or refer a friend for help. More and more kids are really starting to care about their health." **Contact:** Tom Kidd, Health Education Teacher and Coordinator, Osseo-Fairchild Schools, 13th and Francis Sts., Osseo, Wis. 54758; 715/597-3141 or 715/597-3725.

CITIZENSHIP

Citizenship Education, Scotia-Glenville Central School District, Scotia, N.Y. **Objective:** To teach responsible behavior in an organized, formal way in grades one through six.

If a fight breaks out on the playground, students in the Scotia-Glenville schools are well prepared to handle it: They're learning responsible behavior through a formal citizenship education curriculum. The curriculum teaches elementary school students to be "the kind of people everyone would like to have for neighbors," says Assistant Superintendent Ruth J. Kellogg. Written by the school system's teachers, administrators, and parents, with the assistance of staff members at nearby Union College, the curriculum teaches a variety of skills at each grade level. The first grade program helps students to deal with teasing, criticism, and other sources of conflict and to understand the importance of rules and schedules in daily life. In grade three, students learn to develop social concerns and to be sensitive to others' feelings. As they get older, they begin to develop the courage of their convictions while respecting the rights of others who disagree with them. Kellogg emphasizes that parents play a crucial role in the program's success. "We recognize the vital influence that parents and family have in developing attitudes and behavior," she notes. The program is explained to parents at Meet the Teacher Night in each school, and parents receive a guide and a calendar that encourage them to review the school activities with their children. In the yearly evaluation of the program, parents have said their children show more responsible behavior, greater self-esteem, and better interpersonal relationships as a result of the program. "Parents like it so much they want to see it continue through high school," says Kellogg, who reports that the citizenship curriculum is being expanded this year. **Contact:** Ruth J. Kellogg, Assistant Superintendent, Scotia-Glenville Central School District, Business Blvd., Scotia, N.Y. 12302; 518/382-1218.

Ojibwe Language and Culture Education, Cass Lake-Bena School District No. 115, Cass Lake, Minn. **Objective:** To reduce the dropout rate among American Indian students and to give non-Indian students a better understanding of Ojibwe culture.

This school system's American Indian language and culture program is helping Indian students stay in school longer because they are learning subjects that have a special importance for them. And it is giving the non-Indian students in the school system an appreciation of Ojibwe culture. The school system, located on an Indian reservation, experienced racial unrest during the 1970s and high dropout rates among its Indian student population, says Judy A. Hanks, director of Indian education. To remedy these problems, the school system expanded its social studies curriculum to include a class in Ojibwe language and culture for kindergarten through grade nine. Students at the high school level can choose from among five Indian studies electives. The courses are optional. Students go into the field to learn firsthand how wild rice is parched, and they visit local historical sites, museums, and Indian-owned businesses. Local Indian residents also come to the schools to discuss Ojibwe art, foods, clothes, and ceremonies. The courses have helped to diminish stereotypes about Indians, Hanks says, and they've helped the community at large gain a better understanding of Ojibwe culture. The program also has increased the self-esteem of the Indian students and helped reduce their high school dropout rate from 60 percent to 29 percent. And no documented cases of racism or racial unrest have been reported in the past five years, Hanks says. **Contact:** Judy A. Hanks, Director of Indian Education, Cass Lake-Bena School District No. 115, Route 4, Box 3, Cass Lake, Minn. 56633; 218/335-2213.

Education for Citizenship, Marina High School, Huntington Beach (California) Union High School District. **Objective:** To encourage students to become participants, rather than spectators, in community life.

Seniors who take a course in U.S. government in this high school must spend 40 hours in volunteer community service projects during the year. That requirement is part of teacher Pete Snetsinger's plan "to help students participate in community life and enthusiastically seek positive solutions to community problems." As he puts it, "Citizenship means more than living in and paying taxes to the community. It requires participating in the many institutions found in every community." Working closely with business, political, and legal leaders in California's Orange County, Snetsinger offers each student a variety of options that are of "true social value" and "bridge the gap between the classroom and the community." After an orientation program, and with Snetsinger's approval of their projects, students can volunteer in hospitals, elderly and youth organizations, or soup kitchens; they also can work in government or law-related programs, civic or political organizations, or at a local cable television station. A final option allows students to explore future employment possibilities through a mentor program: More than 60 professionals in law, business, and politics meet with students and allow the youngsters to take part in their work. Students make periodic reports on the status of their projects, and they submit a final report. Snetsinger expects students not only to describe the programs and their experiences working in them but also to evaluate the programs and make suggestions for their improvement. In addition, Snetsinger contacts the agencies or mentors for their evaluations of his students. The program has "opened students' eyes to the problems of society," he says. And many, he adds, continue their volunteer work after graduation from high school. **Contact:** Pete Snetsinger, Marina High School, 15871 Springdale St., Huntington Beach, Calif. 92649; 714/893-6571.

South View Connection, South View Junior High School, Edina (Minnesota) Independent School District No. 273. **Objective:** To build students' self-esteem, pride in their school, and positive attitudes and behavior.

Ken Dragseth, principal of this junior high school, didn't want his teenage students hanging out in shopping malls and otherwise floating through life. So he and his staff designed the South View Connection to help students feel better about themselves and their school. The program offers students a variety of activities, with rewards and prizes as incentives, to help them "connect" to their community. Individual students earn connection coupons for participating in food drives or other community service projects, for being active in special school programs, and for having perfect attendance. Homerooms and classes also earn coupons, based on their students' attendance records and participation in various events. Each month, the homeroom with the most connection coupons wins pizza and soda for the entire class, half-price tickets to South View events, or—the most popular prize—breakfast served by the faculty. "We had 70 to 75 percent of our students actively involved last year in multiple activities," Dragseth says. "Even our most pessimistic staff member was surprised" and said the Connection program created the single most striking change she had seen in 31 years. To raise money for the program, which costs between $1,500 and $2,000 per year, the school sponsored a 100-word "spell-a-thon." Students asked family members, friends, and neighbors to pledge money for each word the youngsters spelled correctly. The spell-a-thon generated $3,500, enough to run the program this year, and Dragseth notes that it also showed how far some students had come in learning to care about others. "One homeroom really got behind a ninth grader who wasn't a good speller. The kids helped him study and pledged money. He scored 78 percent in the spelling contest. He said he couldn't believe people really cared so much about him." **Contact:** Ken Dragseth, Principal, South View Junior High School, 4725 South View Lane, Edina, Minn. 55424; 612/927-9721.

Leadership Workshop, School District of Monroe, Wis. **Objective:** To teach young people leadership skills and give them opportunities to use those skills.

A summer leadership workshop is preparing young people in this school system for active roles in their schools and communities. Each year, the workshop trains selected students in grades four through six in academic, social, and athletic leadership skills. The students, recommended by parents and teachers for their leadership potential, spend three weeks in activities that let them use the skills they learn. To develop academic leadership skills, for example, students work at cooperative learning projects and challenging games and puzzles that require library and reference materials. Using rules of parliamentary procedure, they debate topics from divorce to chewing gum in school. To develop leadership skills in athletics, they play games during daily recess that emphasize team spirit, cooperation, and nonviolence. The program, which costs $3,250 to run, has attracted a solid enrollment of approximately 50 students each year, even though summer school opportunities in other areas have greatly expanded.

In Monroe, Wis., a Leadership Workshop student volunteers time to read to a nursing home resident.

says Jane O'Neill, counselor at Abraham Lincoln Elementary School. "We think this is an excellent introduction to leadership skills for the youth who will be active in our community in the future," she says. Many of the program's graduates have become leaders in junior and senior high school: They have served as class and club presidents, athletic team captains, and student council members. "The students enjoy the program and really get something out of it," O'Neill adds. "It's interesting to watch how they grow." **Contact:** Jane O'Neill, Abraham Lincoln Elementary School, 2700 13th Ave., Monroe, Wis. 53566; 608/328-9174.

Values Education Program, Baltimore County Public Schools, Towson, Md. **Objective:** To define a common core of values and ethical behavior and to incorporate those values into the curriculum.

Here's one way values meet the high-tech '80s in this Maryland school system: Children at an elementary

Two youngsters learn the meaning of "trust" at a values fair in the Baltimore County schools.

school encounter a robot whose name, CO-3, stands for compassion, cooperation, and consideration, three of the values emphasized at the school. As part of a systemwide values education program, each school has a committee that has defined a common core of values and worked with staff to infuse those values into the curriculum. Projects have ranged from a study of academic honesty to student productions of original operas based on fairy tales with moral implications. Students performed "The Little Red Hen," for instance, a tale showing that you need to help others with their work if you hope to share in their rewards. Several years ago, the school system decided to teach values and established a task force as a first step. "We had the feeling that kids and parents aren't talking as much as they used to and that values aren't being passed from one generation to the next," says Associate Superintendent Mary Ellen Saterlie, who chaired the task force, a group of educators, citizens, and students. In its report, the task force identified and explained 24 values (including justice, tolerance, and truth) that committee members thought were appropriate for a "democratic and pluralistic society." Then, each of the school system's 147 schools conducted a similar study at the local school level—involving more than 2,000 people in the process. "Now, values are infused into everything we do," Saterlie notes. Values education activities are integrated into the curriculum of every appropriate subject area and at all grade levels. In addition, prominent displays and public-address announcements emphasize them. In some schools, students receive "ethics awards" for demonstrating integrity or other values. As a result of the values education program, school climate has improved, and there is more discussion about ethics and behavior than ever before, Saterlie says. **Contact:** Mary Ellen Saterlie, Associate Superintendent, Baltimore County Public Schools, 6901 Charles St., Towson, Md. 21204; 301/494-4021.

Disabilities Awareness, Tripp School, Aptakisic-Tripp Community Consolidated School District No. 102, Prairie View, Ill. **Objective:** To make students sensitive to and aware of the needs and capabilities of disabled persons.

People in wheelchairs are people, too; they have special needs, but they also have abilities. That's the lesson fourth grade students are learning in this special two-week course. The course helps youngsters understand and learn to assist people with a range of disabilities, from blindness and deafness to mental retardation and motor impairment. Because of the "homogeneous nature of our student population," says Principal Robert Basofin, "we thought it was important to expose students to disabled people and to show them how these people have overcome their particular handicaps. We want students to know that a disability is not a permanent limit to achieving your goals." The school brings in speakers with various disabilities to talk with students. In addition, students spend time studying the nature of particular disabilities. To understand blindness, for example, they study the eye and write and decode messages written in Braille. In studying physical impairments, they learn which facilities in their community are accessible to the handicapped and which aren't. Basofin says the program, which has been running at the school for the past four years, has made an impact on his students. "A whole new dimension in their lives has opened up," he says. "They are excited about learning something new and having an insight into people. I am convinced that this particular unit has value and real meaning. It will stay with the children as they grow older." **Contact:** Robert Basofin, Principal, Tripp School, Aptakisic-Tripp Community Consolidated School District No. 102, 21439 N. Weiland Road, Prairie View, Ill. 60069; 312/634-3580.

Student Group on Race Relations, Shaker Heights (Ohio) City School District. **Objective:** To help sixth grade students deal with issues of race.

A program that uses high school students to help younger children deal with racial issues has won community support in this school system. The Student Group on Race Relations consists of teams of high school students who visit each of the school system's sixth grade classrooms three times a year. Through structured exercises, films, and discussions, the high school students explain how peer pressure can affect social relationships. Using problem-solving exercises, they help children learn

to make conscious decisions on race relations. "The children are taught that how strongly you feel about yourself has a lot to do with how strongly you stand up for your friends," says adviser Marcia Jaffe. "The whole idea of this curriculum is to help people choose their friends without pressure from others." The program focuses on the sixth grade because it seems to be a turning point in race relations. "Both black and white students have said they often become estranged when they get to secondary school," Jaffe says. "We help students prepare for some of the changes and pressures they might face when they leave their small elementary schools for the district's single, large middle school." Teachers of the sixth grade students receive a packet of follow-up activities designed to reinforce the concepts presented by the high school students. Before they teach sixth graders, high school students who want to join the Student Group on Race Relations first must teach the concepts to their peers. The high schoolers derive many benefits from this preparation process, Jaffe says: "Their eyes are opened to the dynamics of their own interactions." Another advantage, she says, is that high school students "can say anything to our sixth graders and have more power than 50 adults." **Contact:** Marcia Jaffe, Consultant and Faculty Adviser, Student Group on Race Relations, Shaker Heights City School District, 15600 Parkland Drive, Shaker Heights, Ohio 44120; 216/921-1400.

Sign Language, Pierce Downer Elementary School, Downers Grove (Illinois) School District No. 58. **Objective:** To teach signing as a foreign language.

Some students at this elementary school are learning a new foreign language: signing. Principal Norman Crandus has a special interest in the deaf, and he believes it's important to "reduce their isolation" by teaching sign language to people who can hear. The result: a new course that has elicited so much interest it has a waiting list of 15-20 students. Crandus found a college student, Ginger James, who volunteered to teach the course. The students in grades four through six are volunteers, too; they receive no academic credit. Beginners meet with James twice a week during their lunch hour; more advanced students meet with her once a week. James starts by teaching Signed English, in which each letter of each word is spelled out. Later in the class, she adds some American Sign Language, the language more frequently used by deaf persons because it's faster than Signed English. Crandus credits student interest in the course to James: "She feels very strongly that if more hearing people could learn to sign, the communications world for deaf people would expand." Students enroll in the class because "they sense signing is something significant," Crandus says. "It has a kind of mystery and genuineness to it, along with the possibility for helping others." Crandus wants to continue the course as long as he can keep James or find another volunteer instructor. "I'd like to see sign language offered at the junior high school level as a foreign language," he adds. "There may be some movement in that direction as more handicapped people move into the mainstream of society." **Contact:** Norman Crandus, Principal, Pierce Downer Elementary School, 1435 Grant St., Downers Grove, Ill. 60515; 312/719-5860.

CAREERS

School-Based Enterprise, St. Pauls High School, St. Pauls (North Carolina) City Schools. **Objective:** To have students learn entrepreneurial skills by starting and operating a business.

This school system is a long way from the Big Apple, but some of its high school students thought a New York-style delicatessen could give the town's fast food restaurants a run for their money. So with school board approval, they opened the Waaayy Off Broadway Delicatessen near Interstate 85. The deli allows them to learn and practice many business skills—and it even makes a profit. After business students did a feasibility study and prepared a plan, the school board allocated $28,000 of the $56,000 needed to buy and equip a building that formerly was a pizza restaurant. Students also received financial support and technical help from the state's Small Business Association and from North Carolina REAL Enterprises (Rural Education through Action Learning). A committee of 11 students and 11 adults handles the overall management of the deli. There always is an adult manager at the restaurant, but the students learn every operation from preparing and serving food to buying equipment and supplies. They are paid for their work, and the jobs are rotated. The school system plans to sell the business after three years, giving the students involved in the project the first chance to buy it. Then, the school system will begin a second cycle involving another school-based business. "These high school students are a tremendous resource, and their abilities and potential are totally underutilized," says Arthur Wall, coordinator of the delicatessen project. "This business gives them a hands-on opportunity to reach their potential." **Contact:** Arthur Wall, Deli Coordinator, St. Pauls City Schools, N. Old State Road, St. Pauls, N.C. 28384; 919/865-4177 or 919/865-4226.

Business and Finance Academy, Westinghouse High School, Pittsburgh Public Schools. **Objective:** To provide a successful school-to-work program for at-risk students, with support from the private sector.

A special banking and finance program is motivating at-risk students in this high school to get their diplomas. The Westinghouse High School Business and Finance Academy is a three-year school-within-a-school that prepares selected students for careers in banking or related industries. The program's 150 students—all of them low achievers who have potential—are referred to the academy by their teachers or by the school's nurse or social worker. They spend part of their day learning business theory and part learning business operations, including computer skills. The students go as a group to English and social studies courses that are tailored to their needs. The social studies program, for example, emphasizes the social, economic, and international scope of finance as a service industry. Besides teaching specialized skills, the program offers small classes and a good deal of individualized attention. "Because we have the students for three years, we have developed good rapport with them. We can make home contacts and really keep up with them," says program coordinator Eunice Anderson. The academy also has a mentor program that pairs each

student with a banker or other business person. The students "benefit from an association with an adult who can give them advice and guidance," Anderson says. This year, a major Pittsburgh bank has started to contract work out to the academy's students, who do a variety of banking tasks at the high school. The school board pays the students, who also receive academic credit for their work; the bank reimburses the board. The bank also has offered several of last year's academy graduates full-time positions. The program, which costs $425,000 a year, was started with a foundation grant, but the school system now pays most of the bill. A yearly report comparing academy students with a statistically similar group showed that those in the program did better academically and were more likely to stay in school than those in the control group. **Contact:** Eunice Anderson, Coordinator, Westinghouse High School Business and Finance Academy, 1101 N. Murtland Ave., Pittsburgh 15208; 412/665-3940.

Modular Home, Anne Arundel County Public Schools, Annapolis, Md. **Objective:** To give students studying construction trades the chance to develop their skills by building a house.

This school system runs a small construction business on the side. Each year, the school system sells a house built by senior high school students who are enrolled in a construction trades curriculum. "We wanted to give students maximum exposure to the process of constructing a modular home," says John Hammond, assistant principal of the school system's Center of Applied Technology-North. Last year, students built a three-bedroom ranch house at a sheltered work site near the school. The $29,000 in materials required to build the 1,350-square-foot structure came from vocational school funds; a school foundation sold the house, offering it to the public on a sealed-bid basis. Profits were put back into the instructional program. The house, built in two units, was transported by tractor trailer to the buyer's site. Last year, the buyer had to have the foundation built, but "this year, we're planning to have kids in masonry classes build the foundation, and kids in home economics will decorate the house," Hammond says. The modular house is a great source of pride and motivation for students and an excellent teaching tool, because the construction process requires skills ranging from carpentry to plumbing. "Our goal is to give our students entry-level skills, so they can go right into a trade after they graduate," he says. The students, bused to the vocational center from their home schools, work two and one-half hours a day and earn three credits a year in the vocational program. They also earn mathematics and science credits. Each instructor directs students in a specific trade and makes sure the house complies with local building codes. According to Hammond, all houses are modular, because "we can eliminate the various problems that are associated with building a home on a construction site—time lost because of weather conditions, thefts, and vandalism." He says the program's greatest benefit, in addition to the vocational skills taught, is the students' "motivation as they see their efforts leading to a finished product." **Contact:** John Hammond, Assistant Principal, Center of Applied Technology-North, Anne Arundel County Schools, 2644 Riva Road, Annapolis, Md. 21401; 301/969-3100.

A young carpenter in Maryland's Anne Arundel County learns the ups and downs of window replacement.

Education and Human Services, Riverside University High School, Milwaukee Public Schools. **Objective:** To help students learn about and gain experience in careers in education and human services.

Contrary to the conventional wisdom, many of today's students *are* interested in helping others. Evidence: High school students in this school can and do volunteer their talents to schools, hospitals, day-care centers, and local community agencies. Students enrolled in the school's education and human services program work at least two and one-half hours a week during their sophomore year in "field placements." Every two weeks, a class period is scheduled to discuss and evaluate student volunteer activities. In their junior year, students take extra classes, especially psychology, and as seniors, they get actual job experience at one location for an entire semester. (Usually, students work as volunteers, although some are paid by the agency or program they work for.) Seniors also have a chance each day to learn decision-making skills and group dynamics and to discuss their job experiences. "We try to get students into positions that are related to their interests," says Judy Skurnick, who heads the education and human services program. "Our main thrust is to help

students form career goals and then get them jobs and references." And, she adds, because of their work experience, "students often get first crack at summer jobs." Skurnick says she finds many students are interested in community service careers these days. "Our program has experienced tremendous growth. In three years, enrollment has gone from 30 students to well over 300." Skurnick believes the volunteer component is useful to students personally as well as professionally: "The program really helps students decide what they want. And it helps them as people; it's good for their personal growth." **Contact:** Judy Skurnick, Education and Human Services, Riverside University High School, 1615 E. Locust St., Milwaukee 53211; 414/964-5900, ext. 52.

Austin High School for Teaching Professions, Stephen F. Austin Senior High School, Houston Independent School District. **Objective:** To expose high school seniors to real teaching experiences in elementary school classrooms.

Seniors in this high school who want a teaching career can see for themselves what teaching is like: An internship gives them the chance to work in an elementary school classroom and get paid for it, too. The internship is designed for seniors enrolled in a four-year magnet school program called the Austin High School for Teaching Professions. During one semester of their last year, students spend two hours a day, four days a week, at one of four assigned elementary school campuses. While there, they work closely with a teacher who helps determine their responsibilities. The seniors do a variety of tasks—from operating audiovisual equipment to tutoring small groups of students and grading student assignments. They receive high school credit and also are paid $4.50 an hour by the school system. In addition to their field experience, students attend a seminar in which they discuss their work, the school and its policies, and other issues relating to teaching. Students are evaluated by the classroom teacher with whom they work; they receive grades for assignments they do in their weekly seminar; and they keep daily journals of their observations and activities at the elementary schools. "The program has helped students see how much planning goes into teaching," says Magnet Coordinator Jay Spuck. "I enjoy hearing what they have to say at our Friday morning sessions together. And what really touches my heartstrings is that some of my high school students take the money they're earning by working in a school and use it to buy supplies for their students." Spuck adds that he has gotten positive comments from teachers and principals at the participating schools. **Contact:** Jay Spuck, Magnet Coordinator, Austin High School for Teaching Professions, Stephen F. Austin Senior High School, 1700 Dumble St., Houston 77023; 713/923-7751, ext. 217.

Vocational Experience Program, Anne Arundel County Public Schools, Annapolis, Md. **Objective:** To provide handicapped students with vocational classroom instruction, job training, and a paid job in the community.

For 20 years, this school system has been operating a successful vocational education program that gives handicapped students a chance to be productive workers and members of society. "We were a 'transition program' long before the term became popular," says John B. Witty, coordinator of special education. The program every year provides classroom instruction, job training, and a paid job to some 200 juniors and seniors who are learning disabled, mentally retarded, or severely emotionally disturbed. The students first are assessed to determine their potential; then they are assigned to courses designed to help them reach their potential. The curriculum is flexible enough to fit the "wide range of different abilities and attitudes that exist among the students," Witty says. Students also get a chance to apply the skills they learn in the classroom to a real-life situation: They get in-house jobs in school buildings. After that experience, Witty says, they move to the next level: a paid job in the community. The program's 17 staff members spend a good deal of time talking to community business people and trying to match each student to a job, Witty says. A follow-up survey of graduates shows the kind of success the program has had: "The majority (75 percent) of the students still are in the same job that we got them," Witty says. "About 15 percent have sought out other jobs, and the final 10 percent got married and stayed home." The program, funded by Anne Arundel County, has been recognized as an exemplary transition program by the Maryland State Department of Education, and Witty credits its success to staff members. "We have dedicated teachers who work to give handicapped students the chance to become productive members of the work force," he says. "And we believe that every kid has that potential." **Contact:** John B. Witty, Coordinator of Special Education, Anne Arundel County Public Schools, 2644 Riva Road, Annapolis, Md. 21401; 301/224-5474.

Under **LANGUAGE ARTS,** see also **Butcher, Baker, and Writer,** page A4.

Under **SCIENCE / TECHNOLOGY,** see also **Engineering Concepts,** page A6.

LEARNING TO LEARN

Success at Magee, Magee Middle School, Tucson (Arizona) Unified School District. **Objective:** To provide a systematic program of organizational and study skills that builds self-esteem for all students.

A program teaching organizational and study skills has dramatically improved discipline and reduced the number of students being held back in this middle school. The faculty-written program teaches seventh and eighth grade students their "middle school A.B.C.s," giving tips about academic success, responsible behavior, and constructive attitudes. "Discipline in the school had been ambiguous and punitive," recalls Patricia L. Gillam, a language arts teacher and chairman of the curriculum design team. "We wanted a program that developed organizational and study skills. Those ultimately build self-discipline and self-esteem" among students. Each student gets a copy of a handbook that enumerates school rules and gives hints on studying for tests, keeping notebooks and assignment calendars, and coming to class prepared. Students discuss the material in the handbook in a

counseling session; classroom teachers reinforce the material, too. "Now, the students know exactly what is expected, and each teacher expects the same things," says Gillam. The school also has introduced the program to parents of students in Magee's feeder schools. Now, incoming students have a good sense of what to expect. The results of the program over the first two years have been "astounding," Gillam says. "Referrals to the principal's office for behavior problems have been reduced by 50 percent," she says. The retention rate also has dropped. Other benefits: less noise in the hallways and lower after-school detention rates. "Before, acting up was pretty standard behavior," Gillam says. "Now, when some students act up, other students come down on them. The students want the program to work." **Contact:** Patricia L. Gillam, Magee Middle School, 8300 E. Speedway Blvd., Tucson, Ariz. 85710; 602/298-3364.

Homework Hot Line, Mesa (Arizona) Unified School District. **Objective:** To give students who need help with their mathematics and language arts homework telephone access to assistance from teachers.

"Math or English homework giving you gray hair?" asks a school system flyer. "Don't fret. Call Homework Hot Line for prompt relief." The hot line is a telephone and television service that makes mathematics and English teachers available to answer questions about homework. Junior and senior high school students can telephone the hot line Monday through Thursday, from 5 to 8 p.m. Teachers also give homework help on-camera two evenings a week on the educational cable channel. The program is televised in the production studio at Mesa's Vocational Technical Center. Five students in a television production class are paid to serve as the technical crew (their teacher waits in the wings in case of emergency). The on-camera teachers, who also are paid, are auditioned to see how their personalities come across on television, explains Hope Mitchell, director of educational television. She says the teachers enjoy their work: Often, they'll dress up in costume for holidays. The school system, which advertises the service through posters and flyers, says students make use of the homework help. Some weeks, the five telephones—four hot lines and a telephone in the television studio—receive more than 200 calls. "We encourage everyone to call in, but the majority of calls are from tenth graders," Mitchell says. "Twelfth grade students seem to use the service least." Mitchell says the hot line, which cost $17,000 last year to operate, is an important extra, and parents and students agree: "One student said the hot line helped raise his grade from a D to a B." **Contact:** Hope Mitchell, Director, Educational Television, Mesa Unified School District, 549 N. Stapley Drive, Mesa, Ariz. 85203; 602/898-6183.

Essentials-of-the-Curriculum Notebook Dividers, Henrico County Public Schools, Highland Springs, Va. **Objective:** To give parents and students precise information about the year's curriculum that will provide a standard for measuring both learning and teaching.

The familiar notebook divider has become an important tool of communication in this school system. School staff members have designed a student-centered curriculum comprising three areas: concepts and skills for each subject, values and attitudes toward learning, and critical thinking skills. The school system gives students a notebook divider for each subject, listing what will be studied in those three areas. The dividers also contain an enrichment section to expand students' interests and further develop their abilities and an "organic" component that allows the teacher to assign additional work in his own areas of expertise. "If a teacher is especially interested in Shakespeare, for example, we'd expect him to take the student beyond minimal levels," explains Edgar V. Wallin, director of elementary and secondary education. As the students go from class to class, using their notebook dividers, they receive constant reinforcement in developing organizational skills and anticipating what they will be learning. "We wanted to say to students, 'These are some things we're going to expect.' Now, we find students and parents holding us accountable by saying, 'You said you were going to cover this, but you're only at this point,' " Wallin says. Teachers turn updated divider sheets over to their principals every six weeks; the dividers tell what has been accomplished and what the teachers plan for the next six weeks. "We wanted the teachers to have the flexibility to rearrange the order of the work if necessary, but we do expect all of them to have met our goals by year's end," Wallin adds. **Contact:** Edgar V. Wallin, Director of Elementary and Secondary Education, Henrico County Public Schools, P.O. Box 40, 201 E. Nine Mile Road, Highland Springs, Va. 23075; 804/737-3510.

Study Skills, Sutton Junior-Senior High School, Sutton (Nebraska) Public Schools. **Objective:** To encourage students to become efficient, effective, independent learners.

Just think of this sentence—"She made Henry eat onions"—and you'll never forget Lakes Superior, Michigan, Huron, Erie, and Ontario. That's one of the memory tricks teacher Mick Stoehr uses in his study skills course for seventh grade students at Sutton Junior-Senior High School. Stoehr, who also teaches history, wanted to help his students "learn how to learn," so he devised a new course that emphasizes ten key study skills. The one-semester course helps students improve their memories, strengthen their reading, control their time, take better notes, and speak more effectively. In reading, for example, Stoehr teaches students to "preview"—to read a chapter's summary and questions first to get a sense of the subject matter. To build their vocabularies, he asks students to learn two new words of their own choosing each week and to tell the class what the words mean and how to pronounce them. Students "correctly use words like 'hypochondriac' and 'prerequisite'—pretty tough words for seventh graders," he says. The word building exercise also has opened channels of communication, Stoehr says: To find new words, students spend more time talking to their parents and reading newspapers. "You can't get to higher level thinking skills until you have the foundation," he argues. "I emphasize repetition. Repetition is the mother of all learning. I force students to memorize, but I help them find ways to make it easier. Sometimes you have to go through a painful process to get to the end result." And the study skills course is paying off, he says: "I can see in my history classes that students' memory skills are better

and that their vocabularies have increased." Costs for the course are minimal: The school system has spent approximately $300 over two years for books on memory and study skills. **Contact:** Mick Stoehr, Sutton Junior-Senior High School, P.O. Box 590, Sutton, Neb. 68979; 402/773-4303.

Integration of Special Education and Regular Education, Aschaffenburg American School, Department of Defense Dependent School, Aschaffenburg, West Germany. **Objective:** To integrate students with special needs into regular classrooms.

When students who are mildly handicapped or who need remedial instruction are able to work side by side with other children their own age, they escape the stigma that often comes with being special education students. In this program, students in grades two through five who have special needs spend half the school day together learning basic skills. A regular classroom teacher, a special education teacher, and a special education teacher aide assess these students in language arts, reading, and mathematics and develop programs for each student based on the results of assessments. During the second half of the day, the students are regrouped by grade to study social studies, science, art, music, physical education, and computer education with other students in the school. Both the special-needs students and their teachers are integrated into grade-level groups. Last year, two of the four grade-level chairmen were special education teachers. "This program has allowed our faculty and staff to provide quality service to mildly handicapped students in the regular classroom and remedial services to low-achieving nonhandicapped students," says special education teacher Mary Beth Clarke. "It also has freed the classrooms from the disruption of having various students leaving at separate intervals to receive services from specialists." **Contact:** Mary Beth Clarke, Aschaffenburg American School, Aschaffenburg, West Germany, A.P.O. New York 09162-0005; 011/49-6021-93828.

Get Civilized / Get Study-wise, Yarmouth Intermediate School, Yarmouth (Maine) Public Schools. **Objective:** To help students better organize for learning.

Students must be organized before they can succeed in school, says Principal Kerry Jones, who's designed a program to help fourth, fifth, and sixth grade students develop better study habits. With the help of a cartoon character named Sam, who never can find his notebook, students learn basic organizing skills: how to keep subject and assignment notebooks, how to organize a monthly calendar, how to study for tests, how to take notes, and how to study at home. Teachers also reinforce children's study habits as needed. In grade four, for example, teachers ask children to take out their assignment notebooks when homework is given; in grade six, teachers expect students to use notebooks without direction. Parental participation also is part of the program. In a brochure distributed to parents, Jones recommends that parents provide students a quiet, comfortable place at home to study and negotiate a mutually agreeable time for study. The brochure also suggests that parents help children pace long-range assignments and learn to understand when and why their children become frustrated or cannot concentrate. And it recommends that parents encourage their children to seek extra help at school when necessary. Jones says the study skills program is working well. "The students really appreciate the help," she says. "I'd say that 85 percent of the students are organized and pretty much ready every day." Still, she adds, "there are always some children, often highly creative, gifted children, who will turn in a wonderful final project—but they can't find their notes." **Contact:** Kerry Jones, Principal, Yarmouth Intermediate School, McCartney St., Yarmouth, Maine 04096; 207/846-3391.

ENRICHMENT

Enrichment and Instructional Material for the Classroom, West Side School District No. 202, Dayton, Idaho. **Objective:** To bring additional enrichment and instructional materials into the classroom and to use them for teacher training.

This school system has tapped into the world of high technology to change and expand its education program. Small, rural, and isolated, the system could not even receive standard educational television broadcasts clearly. So, last year, it bought a satellite dish, a receiver, and two videocassette recorders and monitors, all for approximately $5,000. Now, the schools receive and record a host of educational programs, from science shows to plays. Technology has expanded the school system's course offerings, too: College-level classes in mathematics and foreign languages are beamed from universities in Texas, Oklahoma, and Washington State. Students at West Side High School watch the classes and telephone the professors through a toll-free number when they have questions. Given the school system's small staff, such courses could not have been offered before. "This technology has opened up a whole new world for us. It didn't cost that much to acquire it, but the benefits are astounding," says Superintendent Steven Norton, who also serves as principal of the high school. Norton says the biggest problem has been uncovering and keeping up with the many useful programs being broadcast. Another exciting development, he says, is a "video encyclopedia," a videotaped history of 20th-century America that is used to enrich the social studies curriculum. The school system also allows students to do extensive research via computer access to national data bases. "For an isolated school system like ours, technology has made a great difference in the education we can give our children," Norton says. **Contact:** Renn Rock, District Computer Satellite Coordinator, West Side School District No. 202, Main St., Dayton, Idaho 83232; 208/747-3411 or 208/747-3502.

A.A.A. (Able, Aspiring Achievers), George W. Carver Sixth Grade Center, Duval County Public Schools, Jacksonville, Fla. **Objective:** To provide enrichment activities for academically talented students who do not meet entrance requirements for the gifted program.

High-achieving students who don't qualify for the school system's gifted program have a program of their own at Carver: They spend four hours a week in activities

designed to improve their oral and written communication skills and develop their critical and creative thinking skills. The county's gifted program, which requires students to score in the 98th percentile in two or more areas of the Stanford Achievement Test, has few minority students. But after a review of student records turned up a number of exceptionally talented students at Carver, the school established criteria for its own enrichment program. Now, some 25 sixth graders are in Carver's A.A.A. program. The nongraded program exposes students to a variety of activities they would not normally participate in, says school media specialist Linda Frey, who adds that the program is designed to expand the students' horizons in many areas and to build on their natural intelligence. One morning each week, the students meet in the reading resource room for vocabulary development and exercises in problem solving and critical thinking. Another morning, they meet in the media center for help with writing and media production. The students "inspire each other; they seem to work well together," Frey says. "They like the fact that the work is challenging." **Contact:** Jane Feber, Reading Resource Teacher, or Linda Frey, Media Specialist, George W. Carver Sixth Grade Center, Duval County Public Schools, 1701 Prudential Drive, Jacksonville, Fla. 32207; 904/765-1323.

Extended School Program, Murfreesboro (Tennessee) City Schools. **Objective:** to provide an enriched, flexible curriculum and program of care for latchkey children, making use of school facilities.

Some children in this school system put in a 12-hour school day—and like it. The system operates an Extended School Program for children who might otherwise be at home alone because their parents work. The program started as a pilot program in January 1986, with one school and four children. One year later, it had more than 400 children in three schools; and plans were under way this fall to expand the program to the school system's three other elementary schools. During the school year, the program operates two sessions: a morning program from 6 to 7:45 a.m. and an afterschool session from 2:25 to 6 p.m. Families pay $10 a week per child for the morning program, which includes breakfast, and $19 a week per child for the afternoon session (or $25 per week for both sessions; family discounts are available). The program, which has one staff member for every ten students, offers a variety of activities, from working with computers to studying foreign languages or music. The afternoon session includes a mandatory 45-minute homework session. During the summer, parents pay $40 a week to have their children attend summer school 12 hours a day. The program is fiscally sound, says Program Director Becci Bookner: During its first year, it brought in just over $100,000, which covered most of the costs, excluding Bookner's salary. "To be fair to our taxpayers, we asked that users pay," Bookner says. And, she adds, "this is a very effective use of our $30 million school facilities. Our schools operate greatly in excess of the traditional six and one-half-hour day and 180-day school year." Bookner points to the strong support offered by the school board, school administrators, and members of the community: "Our school board was determined that these latchkey children were not going to be home alone, and people in this town have really made this program work. Volunteers have put in many hours at their own expense." **Contact:** Becci Bookner, Director, Extended School Program, Murfreesboro City Schools, 400 N. Maple St., Murfreesboro, Tenn. 37130; 615/893-2313.

Early Period, Glencoe High School, Glencoe (Minnesota) Independent School District No. 422. **Objective:** To add flexibility to the daily schedule, make better use of community resources, and offer students courses that normally could not be scheduled.

Getting students to school on time might be a problem in some school systems. But at Glencoe, many students actually come early, arriving at 7:15 a.m. to take an extra class. This high school is trying out a new flexible scheduling plan that includes an early period, a class that starts before school normally begins. The idea originated when low enrollment projections, combined with staff and budget cutbacks, forced the high school to reduce the number of courses offered to students. Students had to choose among foreign languages, typing, home economics, or art courses, with "little or no hope of scheduling these other subjects," says Principal Thomas N. Blair. Now, staff members can, if they wish, teach an early period. Juniors and seniors who register for an early class provide their own transportation and breakfast. Those who arrive early also can leave early (some students leave at 12:30 p.m.). Other students use the early period to take advanced work or to catch up on credits they might need for graduation. "Some students are morning people," Blair says. "They're glad to have the chance to learn when their minds are freshest." The program has another advantage: People from the community can come in for morning discussions with students and then head on to their jobs. Overall, Blair says, the program, which involves no extra expense for the school, has worked well. "We believe it's resulted in higher student grades, more classroom accomplishments, greater student and teacher satisfaction, and more community support," he says. **Contact:** Thomas N. Blair, Principal, Glencoe High School, 1825 E. 16th St., Glencoe, Minn. 55336; 612/864-5153.

Crazy Contests, Washington School, Washington-Caldwell School District, Waterford, Wis. **Objective:** To teach students the joy of solving problems and increase their awareness of the world.

Twice a month, mathematics teacher Judith Little features a Crazy Contest on the bulletin board just outside her classroom. She might ask her sixth, seventh, and eighth grade students to name roadside weeds or identify famous athletes, or they might get a question on Wisconsin history or the Statue of Liberty. The purpose behind these Crazy Contests is to get students to "pay more attention to the objects, words, and events that occur around them daily," Little says. And she also wants to foster a love for solving a puzzle or figuring out a brain teaser, "just for the pleasure of it." Each contest consists of ten items to be answered on an "official entry blank" and handed in to Little within two weeks. The person with the most correct answers at each grade level gets a prize: a poster, sticker, comb, or gum. In case of a tie, "spelling counts," Little says. Each student who enters the contest gets some small reward, too. Little's contest material, which "has never cost any money," comes from newspapers, old

magazines, catalogs, picture files, or the kitchen cupboard. "I've been doing this for three years, so my challenge is to keep coming up with new material or a new way to present a contest," Little says. "But I feel successful when 50 percent of the students participate or when students come to me and ask for the next contest." Sometimes, when she's stumped for ideas, her family (or her students) help her out by suggesting topics. The contests, she says, have taught the students to be observant. "Everything you do connects with something else," Little says. "It's a continual process. We build in all directions." **Contact:** Judith Little, Washington School, 8937 Big Bend Road, Highway F, Waterford, Wis. 53185; 414/895-7972.

BEST (Basic Skills/Enrichment Time), Fridley Middle School, Fridley (Minnesota) Independent School District No. 14. **Objective:** To strengthen basic skills, enrich the curriculum, provide remedial work, and anticipate students' problems.

Teachers in this school are doing their best to strengthen students' skills: BEST offers students small, one-hour classes in 18 different areas. All 190 sixth grade students are involved in the special classes, which take place during the regular school day and change every two weeks. Nine of the courses—composition, computer literacy, and library skills among them—are required. Others, providing either remediation or enrichment, are optional. Students are placed in new BEST courses on the basis of test scores and observation. "Our emphasis in this program is to have students be successful and get maximum teacher attention," explains Principal Margaret Leibfried. "The classes have no more than 13 students, and the courses are tailored to the students' needs." The program, Leibfried says, is continually reviewed and revised, following suggestions from teachers. "The teachers work themselves to the bone. But they are so pleased with the program they wouldn't give it up for the world," she says. "The parents love it, and word has spread all over the district. But there is one negative thing: Our seventh and eighth graders want it now, too." **Contact:** Margaret Leibfried, Principal, Fridley Middle School, 6100 W. Moore Lake Drive, Fridley, Minn. 55432; 612/571-6000.

Kids' Mall, Ken-O-Sha Park Elementary School, Grand Rapids (Michigan) Public Schools. **Objective:** To teach mathematics, language, and science skills and concepts by using a classroom shopping mall that motivates students and integrates subjects.

Kids love to hang out at shopping malls, but at Ken-O-Sha Park Elementary School, they don't have to leave the school to visit one: There's a mall right inside a classroom, and it's being used to teach basic skills. "We had a number of students who weren't very motivated," explains Principal Sally Hale. "Our primary goal was to find a way to integrate all subject areas and to incorporate health and science." The Ken-O-Sha Kids' Mall, located along one wall of a first and second grade classroom, includes a restaurant, a bookstore, a florist shop, and a general learning store. Each week, different students are chosen to serve as mall manager and store employes. Students are responsible for learning their respective jobs and for doing the tasks involved in carrying out those jobs. The restaurant often is used for special mathematics lessons, and students also learn basic computational skills. Each child figures out his restaurant check before ordering so he can pay the cashier with the correct change. The restaurant uses play food, but once a week the student manager brings in a real snack to serve. The florist shop is the scene of science and nutrition lessons. The students grow vegetables that are served in the restaurant, and they learn how to care for plants and flowers as well. "We stress new and different vocabulary and language experiences," says Hale, who adds that the mall stimulates independent learning and high interest. "We also find that children's retention of what they have learned has increased because the subjects are integrated," she says. Although teacher Beverly Baney, who started the mall, initially paid for some of the items in the stores herself, most of the project's $150 yearly budget now comes from the school system. **Contact:** Sally Hale, Principal, Ken-O-Sha Park Elementary School, 1353 Van Auken S.E., Grand Rapids, Mich. 49503; 616/246-5180.

Think Tank, Monsignor Kelly High School, Diocese of Beaumont, Beaumont, Texas. **Objective:** To give students a chance to hear professional lectures on nonacademic subjects chosen by the students.

Students at this high school can put their discretionary time to good use by attending Think Tank, a series of regularly scheduled lectures on a variety of nonacademic subjects. Topics have ranged from fishing in Texas to the history of heavy-metal rock music. Speakers give 30-minute formal presentations and allow time at the end for questions and answers. Although many of the speakers are from the community, some faculty members also are invited to give addresses. "That allows students to see a different side of their teachers and gives the teachers a chance to reveal different talents," says Principal Mary Gagne. The lectures generally attract some 300 of the high school's 520 students. Students have been asking for more speakers, Gagne adds, and many more community organizations now have agreed to provide talent for Think Tank. **Contact:** John Conway, Assistant Principal, Monsignor Kelly High School, 5950 Kelly Drive, Beaumont, Texas 77707; 409/866-2351.

Saturday Morning Specials, Menasha (Wisconsin) Joint School System. **Objective:** To provide opportunities for enrichment for students and staff members.

Students who want an alternative to a Saturday morning in front of the tube can find it in this school system: An enrichment program called Saturday Morning Specials offers students everything from foreign languages to mime. "The program provides a good opportunity for us to use our high school facility and give students the chance to get into creative activities," says Superintendent William Decker. "And it gives teachers a chance to try something they've always wanted to try." The program, operated at no cost to the school system, is sponsored by a division of the University of Wisconsin. The school system recruits teachers and coordinates, supervises, and publicizes the enrichment program, which is open to all public and private elementary and secondary school students in the area. Teachers in the school system who

submit proposals for courses have priority, but because the university is the sponsor, others also are eligible. "Many talented people in the area share their skills with the students," Decker says. Students pay $15 per course, which goes to pay the instructors and cover basic administrative costs. The course lineup offers something for everyone, Decker says. Last year's schedule included 18 courses in subjects such as theater, ceramics, woodworking, Spanish, and German. Some of the courses—which are held on seven Saturdays in November, December, and January at Menasha High School—are aimed at different grade levels and some are open to all students. The Saturday Morning Specials have drawn favorable reactions. "The majority of students who enroll say they would take courses again," Decker says. **Contact:** William Decker, Superintendent, Menasha Joint School System, 449 Ahnaip St., P.O. Box 360, Menasha, Wis. 54952; 414/798-2583.

Gifted and Talented Mentolympics, Coke Stevenson Middle School, Northside Independent School District, San Antonio, Texas. **Objective:** To help gifted and talented students gain greater skills in solving problems and working together.

"Problem: Build a bridge using wooden toothpicks to span a ravine 18 inches wide and support as much weight as possible." That problem is just one of the many challenges presented to eighth grade students in this school system's Gifted and Talented Mentolympics, an annual, daylong competition devoted to solving problems. The school organizes its gifted and talented students into groups of six, allowing students some choice about the group in which they're placed. To prepare for the Mentolympics, each group works out a solution to one of several difficult problems in physics, musical theory, or structural analysis. Each group also prepares a five-minute dramatic presentation based on the Mentolympics theme, which last year was Great Moments of Discovery—Eureka! Finally, on the big day, the teams demonstrate an original invention made at home or in school by a team member or the entire team. A panel of judges, usually volunteers from the community, awards prizes in various categories, among them the team with the best overall score. The program, which has an annual budget of $800, has been a "wonderful way for students to demonstrate everything they've learned—critical thinking, creativity, and group dynamic skills," says Carol Richardson, a teacher in the gifted program. "The Mentolympics really is the exciting culmination of progress they've made in the last few years." **Contact:** Carol Richardson or Cindy Plunkett, Coke Stevenson Middle School, 8403 Tezel Road, San Antonio, Texas 78250; 512/681-0720.

LIFE SKILLS

TimeLine, State College (Pennsylvania) Area School District. **Objective:** To provide students with experiences and information that lead to increased self-knowledge, improved social relationships, career awareness, and an understanding of decision making.

"You have just finished a five-page paper for class. You leave the room and return to find that your little sister has colored on three of the pages. What would you say to her?" That question is part of a counseling and guidance program that helps students in this school system understand themselves, communicate more effectively, and make more intelligent decisions. Called TimeLine, the program uses a series of booklets that engage students in thinking about themselves and their lives. Through discussions and written exercises, the students explore their strengths and weaknesses, feelings, values, decisions, and career choices. The program is repeated and reinforced five times during a student's school life—at grades three and six in elementary school and three times during high school. At the elementary school level, counselors work with classroom groups. In secondary school, the students use TimeLine during health or English classes or when visiting the career resource centers of the counseling and guidance departments. At the end of the year, students take home their TimeLine booklets so they can look back later and review how they thought and felt at certain stages in their lives. The program helps students understand that "school is real life, school is a workplace. What you do here and how you handle things have important implications for every aspect of life," says Blossom F. Aberg, director of pupil personnel services. The TimeLine program also has enabled counselors to work with students in more consistent ways. "Too often, counselors can get gobbled up with crisis intervention," Aberg says. "But with this program, which is developmental, we are able to know entire groups of students and follow their progress. And administrators value the program because it gives evidence that we have a systematic approach to providing career information." **Contact:** Blossom F. Aberg, Director of Pupil Personnel Services, State College Area School District, 131 W. Nittany Ave., State College, Pa. 16801; 814/231-1071.

On My Own, School District of Black River Falls, Wis. **Objective:** To help third grade students learn to be responsible and independent while they are caring for themselves at home.

To help latchkey children, this school system offers the On My Own program, a series of workshops that teaches youngsters how to care for themselves at home in a safe and responsible way. "Many children in this district are in homes where there is a single parent or where both parents work," says counselor Marie Marecek. "They are left alone for short periods of time, and that time increases as the child becomes older. Learning self-care becomes essential as adult supervision diminishes." Part of the third grade guidance curriculum, the afternoon workshops originally began as an optional Saturday outreach program called Latchkey Kids. But the program was expanded as school personnel attending the sessions saw a greater need. "We thought all third grade students could use the safety information," Marecek says. "We chose the phrase On My Own because students seemed to react negatively to the term Latchkey." Through workshops on home and fire safety and emergency procedures, students learn how to answer the door and how to respond if a problem arises, and they learn to prepare nutritious snacks. The workshop format also gives children a chance to say how they feel about being alone and independent. An important

part of the curriculum is a parent workshop presented the evening before the student program begins. Parents learn how they can work with the school to build responsible behavior and independent work habits in their children. The workshop also gives parents ways to decide whether their children are ready to take care of themselves, and it allows them to discuss their questions and worries with other parents. "With the increasing number of parents using self-care as a child-care alternative, this issue is a contemporary concern," Marecek says. **Contact:** Marie Marecek, Elementary Counselor, School District of Black River Falls, 301 N. Fourth St., Black River Falls, Wis. 54615; 715/284-4359.

Promoting Personal Safety, Stevens Point (Wisconsin) Area Public School District. **Objective:** To help young people recognize and deal with potentially dangerous situations and teach them when and how they should say No.

Students from this school system who feel threatened by verbal, physical, or sexual abuse are learning how to say No. A health education curriculum, Promoting Personal Safety, helps students in kindergarten through grade four recognize and cope with situations that make them feel unsafe. The curriculum emphasizes the importance of identifying and using a support system of adults—and of feeling free to talk about issues that are troubling. "We maintain that everyone has a right to feel safe and that nothing is so awful you can't talk about it," says Mike Bubla, assistant administrator for curriculum and instruction. Parents are actively involved in the curriculum: They are asked to help students develop personal action plans to use in situations that seem threatening. Home activities include making a list of adults with whom children are allowed to ride and playing a "What If?" game, which includes such questions as, "What if you come home to find you're locked out of the house?" In designing the curriculum, the school system was sensitive to the needs of teachers and parents as well as students. Teachers received extensive training but were encouraged to teach in teams if they felt uncomfortable with some of the topics. "The discussions in the classroom were good, but we asked teachers to keep them on a general basis," Bubla says. "If a child had a personal question, he could talk privately to the teacher at recess or later to protect his privacy and that of his family." Parents offered "many favorable comments," Bubla says. "Some told us that the curriculum had increased communication among family members and had made discussions of topics such as sexual abuse more comfortable." **Contact:** Mike Bubla, Assistant Administrator for Curriculum and Instruction, Stevens Point Area Public School District, 1900 Polk St., Stevens Point, Wis. 54481; 715/345-5445.

Project Discovery, East Troy High School, East Troy (Wisconsin) Community Schools. **Objective:** To give students the chance to acquire the skills necessary to succeed in high school and to make good decisions about their future.

An ongoing, four-year program is helping students in this high school select the right courses, do well in them, and plan for their futures. Through Project Discovery, all students in grades nine through twelve spend 40 minutes once a week developing the problem-solving and decision-making skills they will need to make intelligent career choices. In their freshman year, for instance, they learn study skills. As sophomores, they learn time management and other skills they'll need in the working world. A career awareness program helps juniors and seniors sort out what they want to do and make appropriate plans—for college, technical training, or work—to support their choices. Juniors use a computerized system to determine their career interests; they then spend one day in a job in which they might be interested. An advisory board of parents, business people, and other volunteers assists in the one-day placements. Seniors spend time working on college applications, if they plan to attend college, and learn resume writing, budgeting, and other consumer skills they will need to live on their own. During two days set aside for minicourses, they also discuss hobbies and leisure-time activities they can enjoy as they get older. A variety of speakers, including college students and dropouts, address the students at different times. "This program really is meeting students' needs beyond the academic," says Judith McFarlane, coordinator of Project Discovery. "It's important to help them deal with their futures at a time when the job market and the world are rapidly changing." **Contact:** Judith McFarlane, Coordinator, Project Discovery, East Troy High School, 3128 Graydon Ave., P.O. Box 137, East Troy, Wis. 53120; 414/642-7361.

MOTIVATION

Idea Awards, Fall Mountain Regional School District, Charlestown, N.H. **Objective:** To motivate teachers and students to try out innovative educational activities.

From building puppet theaters to cultivating bonsai plants, teachers in this school system are experimenting with dozens of new educational ideas. What's making these experiments possible are Idea Awards, a series of small grants—no more than $100 each—that allow teachers to try new learning activities. The program, which began in 1981 as part of a federal Teacher Corps grant program, now is underwritten by a $3,000 appropriation from the school board. Teachers submit their ideas and budgets to the Teachers' Council, a group representing teachers in each building in the school system. According to the program's guidelines, funds are awarded to ideas that are new or emphasize sharing with other staff members; teachers cannot apply for money to buy materials for existing programs or computer software. Last year, 34 teachers applied for an Idea Award; 16 were rejected for financial reasons. "The program has gotten bigger every year," says Barbara Massicotte, chairman of the Teacher Council Idea Awards Committee. "We've had to turn down applicants, and that's very hard to do because their ideas are so good." One idea that was funded involved teaching handicapped children to groom and ride horses. "That was very good for our special-needs children, who often don't have the chance to succeed," says Massicotte. "It really built their confidence." Because the 1,805-student school system is rural and the per-pupil expenditure is low, the Idea Awards have made a difference. "They've spread

energy, enthusiasm, and knowledge over our rural district," Massicotte says, "and have had a big impact on morale as well." **Contact:** Barbara Massicotte, Chairman, Teacher Council Idea Awards Committee, Fall Mountain Regional School District, East St., Charlestown, N.H. 03603; 603/835-6351.

Student of the Week, Studebaker Elementary School, South Bend (Indiana) Community School Corp. **Objective:** To improve student achievement and behavior by building self-esteem.

This elementary school's Student of the Week program is motivating children to work hard in school and to behave better. Each week, teachers recommend a student for the honor on the basis of several criteria, such as an improvement in grades, a positive attitude about school, or behavior that other children can emulate. Each week's winner is brought to the principal's office and awarded a school-designed telegram called a Happygram. The student also has his picture taken and posted in the school's trophy case, where it remains for the entire year, and his family gets a bumper sticker that proclaims: "My child was Student of the Week at Studebaker School." Says Principal Jack Ruffner: "In the final analysis, the students are the big winners. Their behavior and academic achievement have steadily improved." Ruffner says the program also helps raise students' self-esteem. "Because self-esteem is learned, it can be changed," he says. "This program helps students feel good about themselves. And when they are proud of themselves, they improve socially and academically." **Contact:** Jack Ruffner, Principal, Studebaker Elementary School, 724 E. Dubail St., South Bend, Ind. 46613; 219/282-2379.

Bumper stickers for parents in South Bend, Ind., are one part of the Student of the Week program.

Academic Challenge, Beaufort County (South Carolina) Public Schools. **Objective:** To promote curriculum discussion and review and to motivate students to study and learn.

This school system's Academic Challenge is doing for academic achievement what the Olympics does for sports: it recognizes excellence and motivates students to do their best. The annual competition, open to every school in Beaufort County, challenges students to compete in ten academic subjects ranging from reading and mathematics to computer science and foreign languages, says Steven E. Ballowe, who started the day long competition four years ago when he was a high school principal in the school system. (He now is associate superintendent for instruction in Virginia's Hopewell Public Schools.) To attend the countywide competition, students at each school compete among themselves to determine the best students in various subjects and at different grade levels. The winning students attend the Academic Challenge as a team, competing in one of five levels—from grade five to high school—in each subject. Individuals can win gold, silver, and bronze metals; teams are awarded first, second, and third-place trophies. In addition, the event includes a science fair and a one-act play contest. Last year, 1,000 students and 500 teachers and administrators participated in the program, which was supported financially by community contributions. Ballowe says the one-day event has a lasting effect on academic achievement. A study conducted following the second Academic Challenge found that students who had participated in the event for two years substantially improved their test scores in basic skills. Those who had participated for one year also showed improvement compared to students who had not competed. The contest also has promoted a positive attitude toward school, says Ballowe, adding, "Our greatest success was the students' feelings of pride and accomplishment." **Contact:** Richard Browne, Director of Secondary Education, P.O. Drawer 309, Beaufort, S.C. 29901; 803/524-2660.

Academic Hall of Fame, Ottawa Hills High School, Grand Rapids (Michigan) Public Schools. **Objective:** To recognize high school students who perform at the highest academic levels.

In this school system, you don't have to demonstrate football prowess to earn a varsity letter. Students who excel at academics win letters, too, and their portraits are permanent additions to the high school's academic Hall of Fame. When Executive Principal Eddie West Jr. came to Ottawa Hills High School, he wanted a way to recognize academic achievement. "We had many reminders of students who were outstanding athletes, but nothing external to show academic achievement," he says. Now, students who earn high grade point averages (freshmen need a perfect 4.0, for example) are inducted into the Hall of Fame at a formal dinner ceremony attended by their families. The students then need to maintain high grades. "You can't goof off the whole year and end up with a 3.5

grade point average for senior year," West says. "It has to be cumulative." The high school inducts some 70 or 80 students each year into the Hall of Fame. Students below the top level who earn at least a 3.0 can earn "academic credit cards" worth 50 cents in the cafeteria or bookstore or to buy school-related items. "The students can redeem the cards at their leisure," West says. "Some save all they've earned and pay for a cap and gown or a school picture." According to West, these programs have helped bring academic achievement to the forefront. "I can't tell you how many students are saying, 'I really want to be a top student.' Now that academic achievement is recognized, the students feel much better about the efforts they're making." **Contact:** Eddie West Jr., Executive Principal, Ottawa Hills High School, 2055 Rosewood S.E., Grand Rapids, Mich. 49506; 616/246-5000.

PARENT INVOLVEMENT

Good News From School, Mustang (Oklahoma) Public Schools. **Objective:** To give parents positive, frequent school reports about student performance.

Parents in this school system don't wonder, "What has Johnny done this time?" when they see a note from school. Now, they receive good news in the mail—in the form of frequent, cheerful postcards that tell when their child has raised a test score or been especially polite to the school bus driver. The Good News From School program began because "our community as a whole has experienced severe financial hardships and rising unemployment in the past two years," explains Cheryl Steele, director of educational programs. "All of us at school made a commitment in summer 1986 to become a positive, cohesive force in the community." Steel designed postcards—with different colors for elementary, middle, and high schools—and made them available to more than 400 staff members, from administrators to custodians. She encouraged staff members to send home a postcard when a student did something, no matter how small, worth writing home about. "During the first 12 weeks, our central office mailed 5,103 cards," Steele recalls, "and that doesn't take into account the numerous cards sent home with students." Teachers also call home if a child does a good deed or improves in an academic area. "We've really had wonderful participation from the teachers," she notes. And parents have been pleased not only about the postcards but about school programs as well. **Contact:** Cheryl Steele, Director of Educational Programs, Mustang Public Schools, 906 S. Heights Drive, Mustang, Okla. 73064; 405/376-2461.

Home Learning Program, Norfolk (Virginia) Public Schools. **Objective:** To increase the academic achievement of kindergarten students from low socioeconomic backgrounds by involving their parents.

The Norfolk schools have given parents of kindergarten students a recipe to help their children succeed in school: regular doses of parent attention, mixed with home learning packets that reinforce basic skills. The Home Learning Program, used in several of the system's elementary schools, targets poor children and parents.

"We have found that the lack of involvement among these parents is a great concern," says kindergarten consultant Jean R. Scott. "Many of the parents do not attend conferences, do not read to their children at home, do not supervise homework, and do not communicate with the school about problems their children have." Scott says the school system wanted to work with kindergarten parents for two reasons: They seem most receptive to parent participation programs, and their early involvement could prevent academic and other problems later. The key to the Home Learning Program is a series of booklets outlining activities children can do with their parents. Each activity is designed to promote language development and to reinforce the instruction taking place at school. When a monthly packet is completed, the child brings it back to school. There, a teacher or volunteer helper tests the child to see if he has mastered the skills in that packet. The program also includes a series of workshops for parents. Conducted by school personnel, the workshops teach parents how to use the packets and suggest additional ways parents can help their children with schoolwork at home. A survey of parents, students, and teachers conducted at the end of the program's first year showed the program was working well, Scott says. Parents said they felt more confident about helping their children, and students in the program did better on measures of academic achievement. **Contact:** Jean R. Scott, Kindergarten Consultant, Norfolk Public Schools, 800 E. City Hall Ave., Norfolk, Va. 23501; 804/441-2617.

PALS (Pages About Learning Skills), Rock Hill (South Carolina) School District No. 3. **Objective:** To inform and involve parents of kindergarten students and foster positive home/school relations.

This school system has developed a program to make parents partners in their children's education right from the start. Called PALS (Pages About Learning Skills), the program consists of a series of letters to parents of kindergarten students that outline 18 specific skills the students will learn during the year. The letters ask parents to reinforce these skills by practicing them with their child for 15 minutes three times a week. Parents sign a sheet indicating the days they have helped the child with the "homework" and return it to school, where a teacher keeps records of parent involvement. "This early involvement of parents is essential to making parents partners in the learning process and in establishing a pattern of support and assistance throughout the child's career," says Joel West, director of elementary education. The kindergarten objectives cover a range of skills—from comparing and classifying objects to working and playing well with others. Each PALS sheet suggests numerous activities parents can do with their child. "These are primarily manipulative activities that involve things already in the home and don't require purchased materials," West says. The program, which began last year, already is showing results: Forty percent of the parents with kindergarten children are participating, and teachers report the program has improved conferences between parents and teachers. "Teachers have been pleased with the response," West says, "and students actually want their homework." **Contact:** Joel West, Director of Elementary Education, Rock Hill School District No. 3, 522 E. Main St., Rock Hill, S.C. 29730; 803/324-5360.

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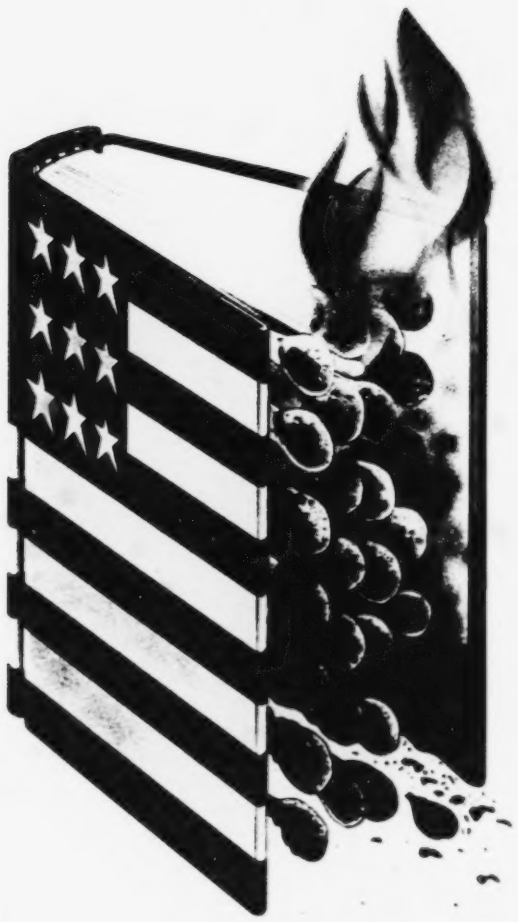

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